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

FORM 10-Q

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

For the quarterly period ended September 30, 2020

[ ] 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 [X] 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 [X] No [ ]

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

Large accelerated filer [ ]	Accelerated filer [ ]
Non-accelerated filer [X]	Smaller reporting company [X]
	Emerging growth company [ ]

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

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

Yes [ ] No [X]

As of November 20, 2020, the Company had 645,649,410, shares of common stock, $0.001 par value, issued and outstanding.

RESPIRERX PHARMACEUTICALS INC.
AND SUBSIDIARY

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Cautionary 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, 2019, as filed with the SEC on April 14, 2020 (the "2019 Form 10-K") and in Item 1A. Risk Factors in this report.

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 2019 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 2019 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.

This discussion should be read in conjunction with the condensed consolidated financial statements (unaudited) and notes thereto included in Item 1 of this report and in the 2019 Form 10-K, including the section titled "Item 1A. Risk Factors." Forward-looking statements speak only as of the date they are made. 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

	September 30, 2020 (unaudited)	December 31, 2019
ASSETS		
Current assets:		
Cash and cash equivalents	$ 216	$ 16,690
Prepaid expenses	56,024	28,638
Total current assets	56,240	45,328
Total assets	$ 56,240	$ 45,328
LIABILITIES AND STOCKHOLDERS' DEFICIENCY		
Current liabilities:		
Accounts payable and accrued expenses, including $634,166 and $476,671 payable to related parties at September 30, 2020 and December 31, 2019, respectively	$ 4,607,590	$ 3,772,030
Accrued compensation and related expenses	1,091,682	2,083,841
Convertible notes payable, currently due and payable on demand, including accrued interest of $79,724 and $113,304 at September 30, 2020 and December 31, 2019, respectively of which $47,526 and $43,666, was deemed to be in default at September 30, 2020 and December 31, 2019 (Note 4)	426,326	551,591
Note payable to SY Corporation, including accrued interest of $399,293 and $363,280 at September 30, 2020 and December 31, 2019, respectively (payment obligation currently in default – Note 4)	795,098	766,236
Notes payable to officer, including accrued interest of $43,869 and $35,388 as of September 30, 2020 and December 31, 2019, respectively (Note 4)	210,219	142,238
Notes payable to former officer, including accrued interest of $54,691 and $41,977 as of September 30, 2020 and December 31, 2019, respectively (Note 4)	182,291	169,577
Other short-term notes payable	31,219	4,634
Total current liabilities	7,344,425	7,490,147
Commitments and contingencies (Note 8)		
Stockholders' deficiency: (Note 6)		
Series B convertible preferred stock, $0.001 par value; $0.6667 per share liquidation preference; aggregate liquidation preference $25,001; shares authorized: 37,500; shares issued and outstanding: 11; common shares issuable upon conversion at 0.00030 common shares per Series B share	21,703	21,703
Common stock, $0.001 par value; shares authorized: 1,000,000,000; shares issued and outstanding: 577,842,003 at September 30, 2020 and 4,175,072 at December 31, 2019, respectively (Note 2 and Note 9)	577,842	4,175
Additional paid-in capital	161,863,565	159,038,388
Accumulated deficit	(169,751,295)	(166,509,085)
Total stockholders' deficiency	(7,288,185)	(7,444,819)
Total liabilities and stockholders' deficiency	$ 56,240	$ 45,328

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

RESPIRERX PHARMACEUTICALS INC.
AND SUBSIDIARY

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	**2019**	**2020**	**2019**
Operating expenses:				
General and administrative, including $492,900 and $121,600 to related parties for the three months ended September 30, 2020 and 2019, respectively, and $725,780 and $364,825 to related parties for the nine months ended September 30, 2020 and 2019, respectively	$ 1,140,204	$ 279,930	$ 1,969,223	$ 874,834
Research and development, including $144,900 and $122,400 to related parties for the three months ended September 30, 2020 and 2019, respectively, and $389,700 and $367,200 to related parties for the nine months ended September 30, 2020 and 2019, respectively	171,776	150,527	480,242	447,877
Total operating expenses	1,311,980	430,457	2,449,465	1,322,711
Loss from operations	(1,311,980)	(430,457)	(2,449,465)	(1,322,711)
Loss on extinguishment of debt and other liabilities in exchange for equity	(65,906)	-	(389,902)	-
Interest expense, including $2,848 and $2,589 to related parties for the three months ended September 30, 2020 and 2019, respectively, and $8,481 and $7,683 to related parties for the nine months ended September 30, 2020 and 2019, respectively	(78,678)	(70,168)	(409,994)	(221,813)
Foreign currency transaction gain (loss)	(22,791)	30,781	7,151	57,135
Net loss attributable to common stockholders	$ (1,479,355)	$ (469,844)	$ (3,242,210)	$ (1,487,389)
Net loss per common share - basic and diluted	$ (0.01)	$ (0.12)	$ (0.02)	$ (0.38)
Weighted average common shares outstanding - basic and diluted	224,352,033	3,874,465	131,793,037	3,873,097

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

RESPIRERX PHARMACEUTICALS INC.
AND SUBSIDIARY

CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' DEFICIENCY
(Unaudited)

Nine months Ended September 30, 2020

	Series B Convertible Preferred Stock		Common Stock		Additional Paid-in	Accumulated	Total Stockholders'
	Shares	Amount	Shares	Par Value	Capital	Deficit	Deficiency
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, 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)
Issuances of common stock (after issuance and full conversion of Series H Preferred Stock)	-	-	253,774,260	253,774	1,435,910	-	1,685,234
Note payable conversions	-	-	13,550,801	13,551	(2,817)	-	10,734
Option grants	-	-	-	-	337,500	-	337,500
Warrant exercises	-	-	88,209,561	88,210	(88,210)	-	-
Net loss	-	-	-	-	-	(1,479,355)	(1,479,355)
Balance, September 30, 2020	37,500	$ 21,703	577,842,003	$ 577,842	$161,863,565	$ (169,751,295)	$ (7,288,185)

Nine months Ended September 30, 2019

	Series B Convertible Preferred Stock		Common Stock		Additional Paid-in	Accumulated	Total Stockholders'
	Shares	Amount	Shares	Par Value	Capital	Deficit	Deficiency
Balance, December 31, 2018	37,500	$ 21,703	3,872,076	$ 3,872	$158,635,222	$ (164,394,052)	$ (5,733,255)
Fair value of common stock warrants issued in connection with convertible notes	-	-	-	-	45,812	-	45,812
Net loss for the three months ended March 31, 2019						$ (540,332)	$ (540,332)
Balance at March 31, 2019	37,500	$ 21,703	3,872,076	$ 3,872	$158,681,034	$ (164,934,384)	$ (6,227,775)
Fair value of common stock warrants and beneficial conversion feature associated with convertible notes					$ 87,950		$ 87,950
Net loss for the three months ended June 30, 2019						(477,213)	(477,213)
Balance, June 30, 2019	37,500	$ 21,703	3,872,076	$ 3,872	$158,768,984	$ (165,411,597)	$ (6,617,038)
Fair value of common stock, warrants and beneficial conversion feature associated with convertible notes			7,500	8	47,493		47,501
Net loss for the three months ended September 30, 2019						(469,844)	(469,844)
Balance, September 30, 2019	37,500	$ 21,703	3,879,576	$ 3,880	$158,816,477	$ (165,881,441)	$ (7,039,381)

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

RESPIRERX PHARMACEUTICALS INC.
AND SUBSIDIARY

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

	Nine Months Ended September 30,	
	2020	**2019**
Cash flows from operating activities:		
Net loss	$ (3,242,210)	$ (1,487,389)
Adjustments to reconcile net loss to net cash used in operating activities:		
Amortization of debt discounts and debt issuance costs	301,515	122,373
Loss on extinguishment of debt and other liabilities	389,902	-
Stock-based compensation	337,500	
Foreign currency transaction (gain) loss	(7,151)	(57,135)
Changes in operating assets and liabilities:		
Prepaid expenses	(27,385)	(15,743)
Accounts payable and accrued expenses	1,062,163	432,579
Accrued compensation and related expenses	700,540	585,900
Accrued interest payable	134,402	105,724
Net cash used in operating activities	(350,724)	(313,691)
Cash flows from financing activities:		
Proceeds from convertible notes borrowings	274,750	263,501
Debt issuance costs	-	(8,000)
Proceeds from issuance of note payable to officer	59,500	25,000
Net cash provided by financing activities	334,250	280,501
Cash and cash equivalents:		
Net decrease	(16,474)	(33,190)
Balance at beginning of period	16,690	33,284
Balance at end of period	$ 216	$ 94

(Continued)

RESPIRERX PHARMACEUTICALS INC.
AND SUBSIDIARY

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)

(Continued)

	Nine Months Ended September 30,	
	2020	**2019**
Supplemental disclosures of cash flow information:		
Cash paid for -		
Interest	$ 4,506	$ 4,936
Non-cash financing activities:		
Beneficial Conversion Feature associated with convertible debt	$ 90,000	-
Debt and accrued interest converted to common stock	$ 975,660	$ -
Issuance of common stock for accrued compensation and benefits	$ 1,684,218	$ -
Issuance of common stock for accounts payable	$ 307,015	$ -
Issuance of warrants for with Series H conversion	$ 1,268,871	
Issuance of common stock with 10% convertible notes	-	$ 1,588
Warrants issued with convertible debt	$ 44,451	80,968
Cashless warrant exercises	$ 103,848	$ -
Original issue discounts associated with convertible debt	$ 19,250	$ 15,500
Issuance of note payable for equity raising costs	$ 40,000	$ -

See accompanying 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 September 30, 2020 and for the three months and nine months ended September 30, 2020 and 2019, are unaudited. In the opinion of management, all adjustments (including normal recurring adjustments) have been made that are necessary to present fairly the consolidated financial position of the Company as of September 30, 2020, the results of its consolidated operations for the three months and nine months ended September 30, 2020 and 2019, changes in its consolidated statements of stockholders' deficiency for the nine months ended September 30, 2020 and 2019 and its consolidated cash flows for the nine months ended September 30, 2020 and 2019. 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, 2019 has been derived from the Company's audited consolidated financial statements at such date.

The condensed consolidated financial statements and related notes have been prepared pursuant to the rules and regulations of the Securities and Exchange Commission (the "SEC"). Accordingly, certain information and 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 for the fiscal year ended December 31, 2019, as filed with the SEC.

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 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 animal 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), including dronabinol (a synthetic form of Δ9-tetrahydrocannabinol ("Δ9-THC")), which acts upon the nervous system's endogenous cannabinoid receptors, and

(ii) our neuromodulators platform (which we refer to as EndeavourRx) is made up of two programs: (a) our ampakines program, including proprietary compounds that are positive allosteric modulators ("PAMs") of AMPA-type glutamate receptors to promote neuronal function and (b) our GABAkines program, including proprietary compounds that are PAMs of $GABA_A$ receptors, 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 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 is considering an internal restructuring plan that contemplates spinning out our two drug platforms into separate operating businesses or subsidiaries.

We believe that by creating one or more subsidiaries to further the aims of Project ResolutionRx and Project EndeavourRx, it may be possible, through separate finance channels, to optimize the asset values of both the cannabinoid platform and the neuromodulator platform.

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 $3,242,210 for the nine months ended September 30, 2020 and $2,115,033 for the fiscal year ended December 31, 2019 respectively, as well as negative operating cash flows of $350,724 for the nine months ended September 30, 2020 and $487,745 for the fiscal year ended December 31, 2019. The Company also had a stockholders' deficiency of $7,288,185 at September 30, 2020 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 audit report on the Company's consolidated financial statements for the year ended December 31, 2019, 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, establishment of new and maintenance and improvement of existing and in-process 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 to fund the Company's business activities.

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 of our programs may be contributed. As a result of the Company's current financial situation, the Company has limited access to external sources of debt and equity financing. Accordingly, there can be no assurances that the Company will be able to secure additional financing in the amounts necessary to fully fund its operating and debt service requirements. If the Company is unable to access sufficient cash resources, the Company may be forced to discontinue its operations entirely and liquidate.

3. Summary of Significant Accounting Policies

Principles of Consolidation

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

Use of Estimates

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

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 (as defined below) 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.

Capitalized Financing 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 or a beneficial conversion feature, the convertible notes and warrants 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.

Notes Exchanges

In cases where debt or other liabilities are exchanged for equity, the Company compares the carrying value of debt, inclusive of accrued interest, if applicable, being exchanged, to the value of the equity issued and records any loss or gain as a result of such exchange. See Note 4. Notes Payable.

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.

Prepaid Insurance

Prepaid insurance represents the premium paid in March 2020 for directors and officers insurance, as well as the amortized amount of an April 2020 premium payment for office-related insurances and clinical trial coverage. Directors' and Officers' insurance tail coverage, purchased in March 2013 expired in March 2020 and all prepaid amounts have been fully amortized. 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

RespireRx periodically issues its common stock, par value $0.001 ("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 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, 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.

Stock options granted to members of the Company's outside consultants and other vendors are valued on the grant date. As the stock options vest, the Company recognizes this expense over the period in which the services are provided.

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

The Company recognizes the 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.

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 September 30, 2020, 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 September 30, 2020, 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 (as defined below), 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 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 period, as specified in the underlying license agreement, and are recorded as liabilities in the Company's condensed consolidated balance sheet, with a corresponding charge to research and development costs in the Company's condensed consolidated statement of operations. Obligations incurred with respect to milestone payments provided for in license agreements are recognized when it is probable that such milestone will be reached and are recorded as liabilities in the Company's condensed consolidated balance sheet, with a corresponding charge to research and development costs in the Company's condensed consolidated statement of operations. Payments of such liabilities are made in the ordinary course of business.

Patent Costs

Due to the significant uncertainty associated with the successful development of one or more commercially viable products based on the Company's research efforts and any related patent applications, all patent costs, including patent-related legal and filing fees, are expensed as incurred 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 September 30, 2020 and 2019, 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.

	September 30,	
	2020	**2019**
Series B convertible preferred stock	11	11
Convertible notes payable	47,239,857	867,200
Common stock warrants	288,093,579	2,016,043
Common stock options	71,660,938	4,287,609
Total	406,994,385	7,170,863

Reclassifications

Certain comparative figures in 2019 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 March 2020, The FASB issued Accounting Standards Update No. 2020-03, Codification Improvements to Financial Instruments. There are seven issues addressed in this update. Issues 1 through 5 were clarifications and codifications of previous updates. Issue 3 relates only to depository and lending institutions and therefore would not be applicable to the Company. Issue 6 was a clarification on determining the contractual term of a net investment in a lease for purposes of measuring expected credit losses, an issue not applicable to the Company. Issue 7 relates to the regaining control of financial assets sold and the recordation of an allowance for credit losses. The amendment related to issues 1, 2, 4 and 5 become effective immediately upon adoption of the update. Issue 3 becomes effective for fiscal years beginning after December 15, 2019. Issues 6 and 7 become effective on varying dates that relate to the dates of adoption other updates. Management's initial analysis is that it does not believe the new guidance will substantially impact the Company's financial statements.

In December 2019, the FASB issued an amendment to the guidance on income taxes which is intended to simplify the accounting for income taxes. The amendment eliminates certain exceptions related to the approach for intra-period tax allocation, the methodology for calculating income taxes in an interim period, and the recognition of the deferred tax liabilities for outside basis differences. The amendment also clarifies existing guidance related to the recognition of franchise tax, the evaluation of a step up in the tax basis of goodwill, and the effects of enacted changes in tax laws or rates in the effective tax rate computation, among other clarifications. The guidance is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020. Management is currently evaluating the impact the guidance will have on our consolidated financial statements.

In June 2016, the FASB issued an amendment to the guidance on the measurement of credit losses on financial instruments. The amendment updates the guidance for measuring and recording credit losses on financial assets measured and amortized cost by replacing the "incurred loss" model with an "expected loss" model. Accordingly, these financial assets will be presented at the net amount expected to be collected. The amendment also requires that credit losses related to available-for-sale debt securities be recorded as an allowance through net income rather than reducing the carrying amount under the current, other-than-temporary-impairment model. The guidance is effective for smaller reporting companies for fiscal years beginning after December 15, 2022 including interim periods within those fiscal years. Early adoption is permitted for annual periods after December 15, 2018. Management is currently evaluating the impact the guidance will have on our consolidated financial statements.

4. Notes Payable

Convertible Notes Payable

Q3 2020 Convertible Notes

Convertible Note with EMA Financial, LLC

On July 30, 2020, RespireRx and EMA Financial, LLC ("EMA") entered into a Securities Purchase Agreement (the "EMA SPA") by which EMA provided a sum of $68,250 (the "EMA Consideration") to RespireRx, in return for a fixed rate convertible note (the "EMA Note") with a face amount of $75,000, and a common stock purchase warrant (the "EMA Warrant") for 3,750,000 shares of Common Stock. The net proceeds received by RespireRx on August 4, 2020 were $63,750 after payment of $3,500 in EMA's legal fees and the withholding by EMA of $1,000 in diligence fees.

The EMA Note obligates RespireRx to pay by October 30, 2021 (the "EMA Maturity Date") a principal amount of $75,000 together with interest at a rate equal to 10% per annum, which principal exceeds the EMA Consideration by the amount of an original issue discount of $6,750. Any amount of principal or interest that is not paid by the EMA Maturity Date would bear interest at the rate of 24% from the EMA Maturity Date to the date such amount is paid.

EMA has the right, in its discretion, at any time, to convert any outstanding and unpaid amount of the EMA Note into shares of Common Stock, provided that such conversion would not result in EMA beneficially owning more than 4.99% of RespireRx's then outstanding Common Stock. In the absence of an event of default, EMA may convert at a per share conversion price equal to $0.02, subject to a retroactive downward adjustment if the lowest traded price on each of the three consecutive trading days following such conversion is lower than $0.02. Upon an event of default, the conversion price is adjusted downward based on a discount to market with respect to subsequent financings or a percentage of the lowest traded price during the twenty one day period prior to the conversion, if lower than $0.02. Upon such conversion, all rights with respect to the portion of the EMA Note being so converted terminate, except for the right to receive Common Stock or other securities, cash or other assets as provided in the EMA Note due upon such conversion.

RespireRx may, with prior written notice to EMA, prepay the outstanding principal amount under the EMA Note during the initial 180 day period by making a payment to EMA of an amount in cash equal to a certain percentage of the outstanding principal, interest, default interest and other amounts owed. Such percentage varies from 110% to 115% depending on the period in which the prepayment occurs, as set forth in the EMA Note.

If, prior to the repayment or conversion of the EMA Note, RespireRx consummates a registered, qualified or unregistered primary offering of its securities for capital raising purposes with aggregate net proceeds in excess of $2,500,000, EMA will have the right, in its discretion, to demand repayment in full of any outstanding principal, interest (including default interest) under the EMA Note as of the closing date of such offering.

The EMA SPA includes, among other things: (1) an automatic adjustment to the terms of the EMA SPA and related documents to the terms of a future financing if those terms are more beneficial to an investor than the terms of the EMA SPA and related documents are to EMA, subject to limited exceptions; and (2) certain registration rights. In addition, the EMA Note prohibits RespireRx from selling or otherwise disposing of a significant portion of its assets outside the ordinary course of business or in connection with a merger or consolidation or sale of all or substantially all of RespireRx's assets where the surviving or successor entity does not assume RespireRx's obligations under the EMA SPA. Further, any subsidiary to which RespireRx transfers a material amount of assets must guarantee certain obligations of RespireRx under the EMA Note.

The EMA Warrant is a common stock purchase warrant to purchase 3,750,000 shares of Common Stock, for value received in connection with the issuance of the EMA Note, from the date of issuance of the EMA Warrant until September 30, 2023, at an exercise price of $0.007 (subject to adjustment as provided therein) per share of Common Stock.

The EMA Note and the shares of Common Stock issuable upon conversion thereof are offered and sold to EMA in reliance upon specific exemptions from the registration requirements of United States federal and state securities laws, which include Section 4(a)(2) of the Securities Act of 1933, as amended (the "Securities Act"), and Rule 506 of Regulation D promulgated thereunder. Pursuant to these exemptions, EMA represented to the Company under the EMA SPA, among other representations, that it was an "accredited investor" as that term is defined in Rule 501(a) of Regulation D under the Securities Act.

The Company determined that there were no embedded derivatives to be identified, bifurcated and valued in connection with this financing.

The outstanding amounts of the EMA Note consists of the following at September 30, 2020 and December 31, 2019:

	September 30, 2020	December 31, 2019
Principal amount of notes payable	$ 75,000	$ -
Unamortized portion of note discounts	(24,009)	
Accrued interest payable	1,274	-
	$ 52,265	$ -

Convertible Note and Equity Purchase Agreement with White Lion Capital, LLC

On July 28, 2020, RespireRx issued a convertible note, as amended ("Commitment Note") to White Lion Capital, LLC ("White Lion") pursuant to, and to induce White Lion to enter into an equity purchase agreement dated July 28, 2020 ("White Lion EPA"). See Note 8. Commitments and Contingencies - *Entry into Equity Purchase Agreement* for a description of the White Lion EPA and the other agreements entered into pursuant to the White Lion EPA. The Commitment Note had an initial face amount of $25,000 which was subsequently amended effective July 28, 2020 to $40,000 in consideration for an amendment to the White Lion EPA extending the date by which RespireRx was to file a registration statement on Form S-1 listing White Lion as the selling stockholder on Form S-1. The Commitment Note was accounted for as equity issuance costs in Additional paid-in capital.

The Commitment Note obligates RespireRx to pay by July 28, 2021 a principal amount of $40,000, together with a guaranteed interest payment of $3,200 representing an 8% per annum interest rate applied regardless of any payments or prepayments other than payments made by conversion of the Commitment Note. Upon an event of default, any amount of outstanding principal or interest would bear interest at the lower of 18% or the highest rate permitted by law.

White Lion has the right, at any time after the first 180 days after execution of the White Lion EPA, to convert any outstanding and unpaid amount (including accrued interest and other fees) into shares of Common Stock, provided that such conversion would not result in White Lion beneficially owning more than 9.99% of the Company's then outstanding Common Stock. Unless an event of default has occurred, White Lion may convert at a per share conversion price equal to $0.02. Upon such conversion, all rights with respect to the portion of the Commitment Note being so converted terminate, except for the right to receive Common Stock. White Lion also has the right, at any time the Commitment Note is outstanding, to apply any outstanding principal or interest as consideration for any equity, equity-linked and/or debt securities offered by the Company in any public offering or private placement, subject to the terms of the Commitment Note.

RespireRx may, with prior written notice to White Lion, prepay the entire outstanding principal amount under the Commitment Note at any time by making a payment to White Lion of an amount in cash equal to 110% of the outstanding principal, guaranteed interest amount, and any default interest or other amounts owed.

RespireRx determined that there were no embedded derivatives to be identified, bifurcated and valued in connection with this financing.

The outstanding amounts of the White Lion Note consist of the following at September 30, 2020 and December 31, 2019:

	September 30, 2020	December 31, 2019
Principal amount of notes payable	$ 40,000	$ -
Accrued interest payable	561	-
	$ 40,561	$ -

Convertible Note with FirstFire Global Opportunities Fund LLC

On July 2, 2020, RespireRx and FirstFire Global Opportunities Fund LLC ("FirstFire") entered into a Securities Purchase Agreement (the "FirstFire SPA") pursuant to which FirstFire provided a sum of $125,000 (the "FirstFire Consideration") to RespireRx, in return for a convertible promissory note (the "FirstFire Note") with a face amount of $137,500 (which difference in value as compared to the FirstFire Consideration is due to an original issue discount of $12,500), a common stock purchase warrant for 6,875,000 shares of the Company's common stock (the "FirstFire Warrant"), and the Confession of Judgment (as defined below), among other agreements and obligations. The net proceeds of the First Fire Consideration, which were received by RespireRx on July 6, 2020, equal $121,000 after payment of $4,000 in FirstFire's legal fees.

Under the terms of the FirstFire SPA and the FirstFire Note, FirstFire paid the FirstFire Consideration at closing. The FirstFire Note obligates RespireRx to pay interest at a rate of 10% per annum on any unpaid principal beginning on July 2, 2020, and to make five monthly amortization payments in the amount of $30,250 each, with the first such payment due on December 2, 2020, and the final such payment, along with any unpaid principal and any accrued and unpaid interest and other fees, due April 2, 2021 (the "FirstFire Note Maturity Date"). Any amount of principal or interest that is not paid when due bears interest at the rate of the lesser of 24% and the maximum amount permitted by law, from the due date to the date such amount is paid.

FirstFire has the right, at any time, to convert any outstanding and unpaid amount of the FirstFire Note into shares of RespireRx's Common Stock or securities convertible into RespireRx's common stock, provided that such conversion would not result in FirstFire beneficially owning more than 4.99% of RespireRx's then outstanding shares of Common Stock. Subject to certain limitations and adjustments as described in the FirstFire Note, FirstFire may convert at a per share conversion price equal to $0.02 (the "FirstFire Fixed Conversion Price"), provided that upon any event of default, the conversion price will equal the lower of (i) the FirstFire Fixed Conversion Price, (ii) discount to market based upon subsequent financings with other investors, or (iii) 60% multiplied by the lowest traded price of Common Stock during the twenty-one consecutive trading day period immediately preceding the date of such conversion. Upon such conversion, all rights with respect to the portion of the FirstFire Note being so converted terminate, except for the right to receive Common Stock or other securities, cash or other assets as provided in the FirstFire Note due upon such conversion.

RespireRx may, with prior written notice to FirstFire, prepay the outstanding principal amount under the FirstFire Note during the initial 180 day period after the execution of the FirstFire SPA by making a payment to FirstFire of an amount in cash equal to a certain percentage of the outstanding principal, interest, default interest and other amounts owed. Such percentage varies from 105% to 115% depending on the period in which the prepayment occurs.

The FirstFire SPA provides FirstFire with certain participation rights in any subsequent offering of debt or equity. Under the FirstFire SPA, RespireRx may not enter into an offering of its securities with terms that would benefit an investor more than FirstFire is benefited under the FirstFire SPA and the agreements ancillary thereto, unless RespireRx offers FirstFire those same terms. The FirstFire SPA also grants FirstFire certain registration rights.

The FirstFire Warrant is a warrant to purchase 6,875,000 shares of Common Stock, for value received in connection with the issuance of the FirstFire Note, from the date of issuance of the FirstFire Warrant until September 30, 2023, at an exercise price of $0.007 (subject to adjustment as provided therein) per share of common stock.

Additionally, RespireRx provided a confession of judgment (the "Confession of Judgment") in favor of FirstFire for the amount of the FirstFire Note plus fees and costs, to be filed pursuant to the terms and conditions of the FirstFire SPA and the FirstFire Note.

The FirstFire Note and the shares of Common Stock issuable upon conversion thereof are offered and sold to FirstFire in reliance upon specific exemptions from the registration requirements of United States federal and state securities laws, which include Section 4(a)(2) of the Securities Act, and Rule 506(b) promulgated by the SEC under the Securities Act. Pursuant to these exemptions, FirstFire represented to RespireRx under the FirstFire SPA, among other representations, that it was an "accredited investor" as that term is defined in Rule 501(a) of Regulation D under the Securities Act.

The Company determined that there were no embedded derivatives to be identified, bifurcated and valued in connection with this financing.

The outstanding amounts of the FirstFire Note consist of the following at September 30, 2020 and December 31, 2019:

	September 30, 2020	December 31, 2019
Principal amount of notes payable	$ 137,500	$ -
Unamortized portion of note discounts	(29,831)	
Accrued interest payable	3,390	-
	$ 111,059	$ -

Q2 2020 Convertible Notes

RespireRx and Power Up Lending Group Ltd. ("Power Up") entered into two securities purchase agreements, dated as of April 15, 2020 and June 7, 2020 (each, a "Power Up Agreement"), by which Power Up loaned $53,000 and $43,000, respectively, to RespireRx in return for two convertible promissory notes (the "April 2020 Note" and the "June 2020 Note" respectively), a limited guaranty associated with the April 2020 Note, and the delivery into escrow of a confession of judgment in favor of Power Up for the amount of the April 2020 Note plus fees and costs to be filed by Power Up upon the occurrence of an Event of Default (as defined in the April 2020 Note) and other transaction-related documents associated with both the April 2020 Note and the June 2020 Note. The proceeds of the loans, which equal $90,000 after payment of $5,000 in legal fees and $1,000 in due diligence fees, were used for general corporate purposes.

The April 2020 Note was repaid by conversion in October 2020 (See Note 9. Subsequent Events). The June 2020 Note will be payable on June 7, 2021, (the "June 2020 Note Maturity Date"), and bears interest at a rate equal to 12% per annum, with any amount of principal or interest which is not paid when due bearing interest at the rate of 22% per annum.

Power Up has the right, at any time during the period beginning on the date that is 180 days following the date of the June 2020 Note and ending on the later of (i) the applicable June 2020 Note Maturity Date and (ii) the date of payment of the Default Amount (as defined in the notes), to convert any outstanding and unpaid amount of the June 2020 Note into shares of RespireRx's common stock or securities convertible into RespireRx's common stock (the "June 2020 Note Conversion Shares"), provided that such conversion would not result in Power Up beneficially owning more than 4.99% of RespireRx's common stock. Subject to certain limitations and adjustments as described in the June 2020 Note, Power Up may convert at a per share conversion price equal to 61% of the lowest trading price of the common stock as reported by the exchange on which RespireRx's shares are traded, for the twenty trading days prior to, but excluding, the day upon which a notice of conversion is received by RespireRx. Upon the conversion of all amounts due under the June 2020 Note, would be deemed repaid and terminated. The April 2020 Note was repaid and terminated in this manner in October 2020. See Note 9. Subsequent Events.

RespireRx may prepay the outstanding principal amount under the June 2020 Note by paying a certain percentage of the sum of the outstanding principal, interest, default interest and other amounts owed. Such percentage varies from 120% to 145% depending on the period in which the prepayment occurs, as set forth in the June 2020 Note. During the period in which the June 2020 Note is outstanding, subject to certain limited exceptions, RespireRx must notify Power Up in advance of closing of any financing transactions with third party investors. At Power Up's discretion, RespireRx must amend and restate each note, including its conversion terms, and the June 2020 Note Conversion Shares to be identical to the instruments evidencing such financing transaction.

Both the April 2020 Note and the June 2020 Note and the shares of common stock issuable upon conversion thereof were offered and sold to the Lender in reliance upon specific exemptions from the registration requirements of United States federal and state securities laws, which include Section 4(a)(2) of the Securities Act. Pursuant to these exemptions, Power Up represented to RespireRx under each Power Up Agreement, among other representations, that it was an "accredited investor" as that term is defined in Rule 501(a) of Regulation D under the Securities Act.

The Company determined that there were no embedded derivatives to be identified, bifurcated and valued in connection with this financing.

The outstanding amounts of the April 2020 Note and June 2020 Note consist of the following at September 30, 2020 and December 31, 2019:

	September 30, 2020	December 31, 2019
Principal amount of notes payable	$ 96,000	$ -
Unamortized portion of note discounts	(58,057)	
Accrued interest payable	4,553	-
	$ 42,496	$ -

On October 22, 23 and 26, 2020, Power Up converted the outstanding principal amount and all accrued and unpaid interest related to the April 2020 Note into 28,804,407 shares of Common Stock and as of October 26, 2020 the April 2020 Note is deemed repaid and terminated. See Note 9. Subsequent Events.

2019 Convertible Notes

On November 4, 2019, October 22, 2019, August 19, 2019, May 17, 2019 and April 24, 2019, the Company issued a series of convertible notes ("2019 Convertible Notes"), all similar in nature, all subject to debt issuance costs ("DIC") and original issue discount ("OID") and beneficial conversion ("BCF") features and some subject to the issuance of warrants ("NW") and/or commitment shares ("CS") and placement agent fees. Two of the notes had maturity dates nine months after issuance and three were for one year. One note was a master note agreement in the amount of $150,000, but with an initial drawdown of $50,000. The Company evaluated all of the terms of the 2019 Convertible Notes and determined that, in accordance with ASC 815, there were no derivatives to be bifurcated or separately valued. Each of the April, 24, 2019, May 17, 2020, August 19, 2019, October 22, 2019 and November 4, 2019 Convertible Notes was satisfied in full by the lenders electing to convert the outstanding balances to Common Stock, except for $2,747 of accrued interest that remains outstanding under the May 17, 2019 Convertible Note.

Inception date	Maturity date	Original principal amount	Interest rate	Original aggregate DIC, OID, BCF, NW and CS	Cumulative amortization of DIC, OID, BCF, NW and CS	Principal remaining at September 30, 2020	Accrued Interest at September 30, 2020	Balance sheet carrying amount at September 30, 2020 inclusive of accrued interest
May 17, 2019	May 17, 2020, extended to November 17, 2020	$ 50,000	10%	$ 50,000	$ 50,000	$ -	$ 2,747	$ 2,747
	Total	$ 50,000		$ 50,000	$ 50,000	$ -	$ 2,747	$ 2,747

2018 Q4 and 2019 Q1 Notes and Original Convertible Notes

On December 6, 2018, December 7, 2018 and December 31, 2018 the Company issued convertible notes (each a "2018 Q4 Note") and on January 2, 2019, February 27, 2019, March 6, 2019 and March 14, 2019, the Company issued additional convertible notes (each a "2019 Q1 Note", respectively and collectively with the "2018 Q4, the "2018 Q4 and 2019 Q1 Notes") bearing interest at 10% per year. All of the 2018 Q4 and 2019 Q1 Notes matured on either February 28, 2019 or April 30, 2019. The original aggregate principal amount was $190,000. None of the 2018 Q4 and 2019 Q1 Notes were repaid at maturity. The 2018 Q4 and 2019 Q1 Note investors also received an aggregate of 190,000 common stock purchase warrants. The warrants were valued using the Black Scholes option pricing model calculated on the date of each grant and had an aggregate value of $146,805. Total value received by the investors was $336,805, the sum of the face value of the convertible note and the value of the warrant. Therefore, the Company recorded a debt discount associated with the warrant issuance of $82,159 and an initial value of the convertible notes of $107,841 using the relative fair value method. All debt discounts were fully amortized by the original maturity dates. On March 21, 2020, all except one of the 2018 Q4 and 2019 Q1 Note holders exchanged the outstanding principal amount and accrued interest for shares of common stock. The exchange price was $0.015 per share of common stock. The closing price on March 20, 2020, the last trading day before the closing of the exchange agreements which took place on a Saturday, was $0.034 per share of common stock. An aggregate of $155,000 of principal and $17,911 of accrued interest was exchanged for 11,527,407 shares of common stock. The Company recorded a loss on the extinguishment of the exchanged 2018 Q4 Notes and 2019 Q1 Notes of $219,021. As of September 30, 2020, there remains one outstanding 2018 Q4 Note and one outstanding 2019 Q1 Note, both held by the same single investor, with an aggregate principal amount of $35,000 and aggregate accrued interest of $6,215 as of September 30, 2020. The 2019 Convertible Notes discussed above, which the Company does not consider to have arisen from one or more offerings, may be interpreted in such a way that the remaining 2018 Q4 Note and 2019 Q1 Note holders had the right to convert or exchange into such notes. However, no holder of the Q4 2018 and 2019 Notes has requested such a conversion or exchange. The Company does not believe that an offering occurred as of September 30, 2020 or as of the date of the issuance of these financial statements. Therefore, the number of shares of common stock (or preferred stock) into which the remaining 2018 Q4 Note and the remaining 2019 Q1 Note may convert is not determinable and the Company has not accounted for any additional consideration. The warrants to purchase 190,000 shares of common stock issued in connection with the sale of the 2018 Q4 and 2019 Q1 Notes are exercisable at a fixed price of $1.50 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. The warrants issued to the Q4 2018 and Q1 2019 Note holders expire on December 30, 2023. The Company determined that there were no embedded derivatives to be identified, bifurcated and valued in connection with this financing.

The 2018 Q4 Notes and 2019 Q1 Notes consist of the following at September 30, 2020 and December 31, 2019:

	September 30, 2020	December 31, 2019
Principal amount of notes payable	$ 35,000	$ 190,000
Accrued interest payable	6,215	17,976
	$ 41,215	$ 207,976

Other convertible notes were also sold to investors in 2014 and 2015 (the "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 for common stock or expired.

On March 21, 2020, the holder of one of the Original Convertible Notes exchanged $50,000 of principal and $32,875 of accrued interest for 5,525,017 shares of the Company's common stock. The exchange price was $0.015 per share of common stock. The closing price on March 20, 2020, the last trading day before the closing of the exchange agreements, was $0.034 per share of common stock. The Company recorded a loss on the extinguishment of the exchanged Original Convertible Note of $104,975.

The remaining outstanding Original Convertible Notes (including that for which a default notice has been received) consist of the following at September 30, 2020 and December 31, 2019:

	September 30, 2020	December 31, 2019
Principal amount of notes payable	$ 75,000	$ 125,000
Accrued interest payable	60,983	82,060
	$ 135,983	$ 207,060

As of September 30, 2020, 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 $47,526, of which $22,526 was accrued interest. As of December 31, 2019, principal and accrued interest on Original Convertible Notes subject to default notices totaled $43,666 of which $18,666 was accrued interest.

As of September 30, 2020 all of the outstanding Original Convertible Notes, inclusive of accrued interest, were convertible into an aggregate of 11,955 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., formerly known as Samyang Optics Co. Ltd. ("SY Corporation"), an approximately 20% common stockholder of the Company at that time. SY Corporation was a significant stockholder and a related party at the time of the transaction but has not been a significant stockholder or related party of the Company subsequent to December 31, 2014. The note accrues simple interest at the rate of 12% per annum and had a maturity date of June 25, 2013. The Company has not made any payments on the promissory note. At June 30, 2013 and subsequently, the promissory note was outstanding and in default, although SY Corporation has not issued a notice of default or a demand for repayment. Management believes that SY Corporation is in default of its obligations under its January 2012 license agreement, as amended, with the Company, but the Company has not yet issued a notice of default. The Company has in the past made several efforts towards a comprehensive resolution of the aforementioned matters involving SY Corporation. During the nine months ended September 30, 2020, there were no further communications between the Company and SY Corporation.

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

Note payable to SY Corporation consists of the following at September 30, 2020 and December 31, 2019:

	September 30, 2020	December 31, 2019
Principal amount of note payable	$ 399,774	$ 399,774
Accrued interest payable	399,293	363,280
Foreign currency transaction adjustment	(3,969)	3,182
	$ 795,098	$ 766,236

Interest expense with respect to this promissory note was $12,092 and $12,092 for the three months and was $36,013 and $35,881 for the nine months ended September 30, 2020 and 2019, respectively.

Notes Payable to Officers and Former Officers

For the three months ended September 30, 2020 and 2019, $2,848 and $2,589 and for the nine months ended September 30, 2020, $8,481 and $7,683 was charged to interest expense with respect to Dr. Arnold S. Lippa's notes, respectively.

Other Short-Term Notes Payable

Other short-term notes payable at September 30, 2020 and December 31, 2019 consisted of premium financing agreements with respect to various insurance policies. At September 30, 2020, a premium financing agreement was payable in the initial amount of $70,762, with interest at11% per annum, in nine monthly installments of $8,256 and which resulted in a remaining balance of $24,321 at September 30, 2020. In addition, there is a balance of $6,899 of short-term financing of office and clinical trials insurance premiums that includes a prior period premium financing of $2,317. At September 30, 2020 and December 31, 2019, the aggregate amount of the short-term notes payable was $31,219 and $4,635 respectively.

5. Settlement and Payment Agreements

On December 16, 2019, RespireRx and Salamandra, LLC ("Salamandra") entered into an amendment to the settlement agreement and release, executed August 21, 2019 (the "Original Settlement Agreement" and as amended, the "Amended Settlement Agreement") regarding $202,395 owed by the Company to Salamandra (as reduced by any further payments by the Company to Salamandra, the "Full Amount") in connection with an arbitration award previously granted in favor of Salamandra in the Superior Court of New Jersey. Under the terms of the Original Settlement Agreement, the Company was to pay Salamandra $125,000 on or before November 30, 2019 in full satisfaction of the Full Amount owed, subject to conditions regarding the Company's ability to raise certain dollar amounts of working capital. Under the Amended Settlement Agreement, (i) the Company was to pay and the Company paid to Salamandra $25,000 on or before December 21, 2019, (ii) upon such payment, Salamandra ceased all collection efforts against the Company until March 31, 2020 (the "Threshold Date"), and (iii) the Company was to pay to Salamandra $100,000 on or before the Threshold Date if the Company had at that time raised $600,000 in working capital. Such payments by the Company would have constituted satisfaction of the Full Amount owed and would have served as consideration for the dismissal of the action underlying the arbitration award and the mutual releases set forth in the Amended Settlement Agreement. If the Company had raised less than $600,000 in working capital before the Threshold Date, the Company was to pay to Salamandra an amount equal to 21% of the working capital amount raised, in which case such payment would have reduced the Full Amount owed on a dollar-for-dollar basis, and Salamandra would then have been able to seek collection on the remainder of the debt. The Company made the initial payment of $25,000 in December 2019, but did not make the subsequent required payment on March 31, 2020, nor has any payment been made since that time. The Company has initiated further discussions with the intent of reaching a revised settlement agreement which cannot be assured.

In June 2020, the Company made a settlement proposal to a vendor, the terms of which, if accepted by the vendor would supersede a prior agreement in principle originally reached on September 23, 2019 regarding the payment schedule of undisputed amounts owed by the Company to the vendor. The current proposal includes, among other things, an extension of time until December 31, 2020 to raise the amounts owed. Neither the original agreement in principle nor the discussion of amendments has resulted in a formal agreement. The original agreement in principle called for a payment of a minimum of $100,000 on or before November 30, 2019 assuming the Company had raised at least $600,000 by that date and thereafter called for a payment of $50,000 per month until paid in full. No payments had been made through September 30, 2020 with respect to the original agreement in principle. Given that as of September 30, 2020, a final agreement had not been reached and management does not believe that the proposed extension for the first payment to December 31, 2020 will be achievable, RespireRx intends to make a new proposal, similar to the last, but with an extended timeframe and smaller monthly amounts. The currently proposed settlement has not yet been finalized calls for a payment of $100,000 if RespireRx is able to raise $700,000 by December 31, 2020 with subsequent settlement payments of $50,000 per month with a residual final payment of less than $50,000 representing the remaining balance. Under the current proposal, if RespireRx raises less than $700,000 by December 31, 2020, the Company may cancel a portion of the amount owed to the vendor by paying at least 21% of the working capital raised which amount would reduce the amount owed dollar-for-dollar and the vendor would be able to seek collection of the balance.

The due date of the $100,000 annual amount payable to the University of Illinois that was originally due on December 31, 2019 pursuant to the 2014 License Agreement (as defined below), was extended to June 30, 2020 and further extended to July 7, 2020 when it was paid in full.

6. Stockholders' Deficiency

Reserved and Unreserved Shares of Common Stock

At September 30, 2020, RespireRx had 1,000,000,000 shares of common stock authorized and 577,842,003 shares of common stock issued and outstanding. RespireRx has reserved 11 shares of common stock for conversion of the Series B Preferred Stock, 145,198,671 shares of common stock for conversion of various convertible notes, inclusive of contractual reserves that had not been waived, 145,198,671 for warrant exercises, inclusive of contractual reserves that had not been waived but which excludes reserves for warrant exercises with respect to 253,774,260 warrants for which reserve requirements have been waived until November 25, 2020, and 71,660,938 for the exercise of outstanding options. RespireRx has not reserved shares of common stock with respect unissued shares available for issuance from the 2014 Plan or the 2015 Plan and will reserve for such unissued shares, if the Amendment to its Certificate of Incorporation is filed with the Secretary of State of Delaware increasing the authorized shares of Common Stock from 1,000,000,000 to 2,000,000,000 (see below). RespireRx has reserved 6,497 Pier Contingent shares. There are 87,018,841 shares of common stock available for issuance. The above amounts include certain contractual reserve requirements of certain convertible notes and exercisable warrants in excess of actual conversion or exercise amounts which contractual reserve requirements had not been waived. Management believes that the Common Stock available for issuance is adequate to meet all conversions and option and warrant exercises at all times. Any and all contractual reserve requirements in all convertible notes that are not yet convertible, including with respect to the Commitment Note issued in favor of White Lion, have been waived by the respective holders until November 25, 2020.

RespireRx has called for a special meeting of stockholders to be held at 9:00am Eastern Time on November 24, 2020 to vote on two proposals that were recommended by the Board of Directors. One proposal is to effect a ten for one (10:1) reverse stock split of all issued and outstanding shares of Common Stock and the second proposal is to increase the authorized shares from 1,005,000,000 to 2,005,000,000 of which 5,000,000 would be authorized preferred stock. The net result would be to increase the authorized shares of Common Stock from 1,000,000,000 to 2,000,000,000. If both proposals are approved by stockholders at the special meeting, RespireRx plans to file one or more amendments to its Certificate of Incorporation to effect both of these proposals as soon as practical. The increase in the authorized number of shares of Common Stock would allow the Company to remain in compliance with contractual reserve requirements following the November 25, 2020 expiration of the waivers of such requirements.

Preferred Stock

RespireRx has authorized a total of 5,000,000 shares of preferred stock, par value $0.001 per share. As of September 30, 2020 and December 31, 2019, 1,250,000 shares were designated as 9% Cumulative Convertible Preferred Stock; 37,500 shares were designated as Series B Convertible Preferred Stock (non-voting, "Series B Preferred Stock"); 205,000 shares were designated as Series A Junior Participating Preferred Stock; 1,700 shares were designated as Series G 1.5% Convertible Preferred Stock. On July 13, 2020, RespireRx designated 1,200 shares of Series H, Voting, Non-participating, Convertible Preferred Stock ("Series H Preferred Stock") and on September 30, 2020 RespireRx amended the Certificate of Designation of the Series H Preferred Stock to increase the number of shares of Series H Preferred Stock to 3,000 shares. On July 13, 2020 and September 30, 2020, RespireRx issued an aggregate of 1,624.1552578 shares of Series H Preferred Stock inclusive of 2% accrued dividends, all of which converted on September 30, 2020 into 253,774,260 shares of Common Stock and warrants to purchase 253,774,260 shares of Common Stock, and therefore as of that time on September 30, 2020, there were no shares of Series H Preferred Stock outstanding. Under the Certificate of Designation of the Series H Preferred Stock, shares of Series H Preferred Stock converted or redeemed by conversion are to be canceled and are not to be reissued. Accordingly, as of the time of this conversion on September 30, 2020 and on December 31, 2019, 3,504,424.1552578 shares of preferred stock and 3,505,800 shares of preferred stock, respectively, were undesignated and were able to be issued with such rights and powers as the Board of Directors may designate.

Series B Preferred Stock outstanding as of September 30, 2020 and 2019 consisted of 37,500 shares issued in a May 1991 private placement. Each share of Series B Preferred Stock is convertible into approximately 0.00030 shares of common stock at an effective conversion price of $2,208.375 per share of common stock, which is subject to adjustment under certain circumstances. As of September 30, 2020 and December 31, 2019, the shares of Series B Preferred Stock outstanding are convertible into 11 shares of common stock. RespireRx may redeem the Series B Preferred Stock for $25,001, equivalent to $0.6667 per share, an amount equal to its liquidation preference, at any time upon 30 days prior notice.

Common Stock

There were 577,842,003 shares of RespireRx's Common Stock outstanding as of September 30, 2020. On or before September 30, 2020, certain holders of convertible notes and Series H Preferred Stock waived the contractual reserve requirements associated with such convertible notes and the reserve requirements associated with the Series H Preferred Stock and warrants issued upon conversion of the Series H Preferred Stock, until November 25, 2020. With such waivers and after giving effect to the conversions of Series H Preferred Stock discussed above, RespireRx had 87,036,986 shares of Common Stock available for issuance on September 30, 2020. As described above, RespireRx has sought stockholder approval on November 24, 2020, to increase its authorized shares of Common Stock from 1,000,000,000 (1 billion) to 2,000,000,000 (2 billion) . If approved by the stockholders, RespireRx intends to effect this increase in the number or authorized shares of Common Stock on November 24, 2020 or November 25, 2020. This increase will allow the Company to remain in compliance with contractual reserve requirements following the November 25, 2020 expiration of the waivers of such requirements. Previously, on March 21, 2020, the Board of Directors approved an amendment to the Certificate of Incorporation to increase the authorized shares of common stock from 65,000,000 shares to 1,000,000,000 (one billion) shares subject to approval by the holders of a majority of voting stock of RespireRx, appropriate notification of all shareholders and subject to the authorized officers making the appropriate filings with the Secretary of State of the State of Delaware. On March 22, 2020, holders of a majority of voting stock of RespireRx consented to this increase in writing without a meeting. The amendment to the Certificate of Incorporation and increase in the number of authorized shares of common stock became effective on April 30, 2020 when RespireRx filed the amendment with the Secretary of State of Delaware. If approved by the stockholders, it is anticipated that another amendment to the Certificate of Incorporation will be filed with the Secretary of State of Delaware as soon as practical to effect a further increase in authorized shares of common stock, as discussed above. There can be no assurance that either proposal will be approved at the special meeting of stockholders.

Equity Purchase Agreement with White Lion Capital LLC

For a description of the White Lion EPA, see Note 8. Significant Agreements and Contracts – *Equity Purchase Agreement and Registration Rights Agreement.*

Common Stock Warrants

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

A summary of warrant activity for the nine months ended September 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	2,191,043	$ 1.87109	3.44000
Issued including issuances as a result of anti-dilution protections	395,850,387	0.00521	2.89772
Expired	(254,353)	(5.99808)	-
Exercised	(109,693,498)	(0.00161)	-
Warrants outstanding and exercisable at September 30, 2020	288,093,579	$ 0.01474	2.88832

The exercise prices of common stock warrants outstanding and exercisable are as follows at September 30, 2020:

Exercise Price	Warrants Outstanding (Shares)	Warrants Exercisable (Shares)	Expiration Date
$ 0.001600	22,125,000	22,125,000	May 17, 2022
0.007000	264,399,260	264,399,260	September 30, 2023
$ 1.000000	916,217	916,217	September 20, 2022
$ 1.500000	190,000	190,000	December 30, 2023
$ 1.562000	130,284	130,284	December 31, 2021
$ 1.575000	238,814	238,814	April 30, 2023
$ 2.750000	8,000	8000	September 20, 2022
$ 7.930000	86,004	86,004	February 28, 2021
	288,093,579	288,093,579	

Based on a value of $0.0054 per share on September 30, 2020, there were 22,125,000 exercisable in-the-money common stock warrants as of September 30, 2020 with an intrinsic value of $84,075.

A summary of warrant activity for the nine months ended September 30, 2019 is presented below.

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in Years)
Warrants outstanding at December 31, 2018	1,783,229	$ 2.20393	3.06
Issued	302,372	0.95908	
Expired	(69,558)	2.65928	
Warrants outstanding at September 30, 2019	2,016,043	$ 1.99011	2.73

The exercise prices of common stock warrants outstanding and exercisable are as follows at September 30, 2019:

Exercise Price	Warrants Outstanding (Shares)	Warrants Exercisable (Shares)	Expiration Date
$ 0.5000	150,000	150,000	August 19, 2024
$ 1.0000	916,217	916,217	September 20, 2022
$ 1.1800	42,372	42,372	May 17, 2022
$ 1.5000	190,000	190,000	December 30, 2023
$ 1.5620	130,284	130,284	December 31, 2021
$ 1.5750	238,814	238,814	April 30, 2023
$ 2.7500	8,000	8,000	September 20, 2022
$ 4.8750	108,594	108,594	September 30, 2020
$ 6.8348	145,758	145,758	September 30, 2020
$ 7.9300	86,004	86,004	February 28, 2021
	2,016,043	2,016,043	

Based on a fair market value of $0.45 per share on September 30, 2019, there was no intrinsic value of exercisable in-the-money common stock warrants as of September 30, 2019.

Stock Options

On March 18, 2014, RespireRx adopted its 2014 Equity, Equity-Linked and Equity Derivative Incentive Plan (the "2014 Plan"). The Plan permits the grant of options and restricted stock with respect to up to 325,025 shares of common stock, in addition to stock appreciation rights and phantom stock, to directors, officers, employees, consultants and other service providers of the Company.

On June 30, 2015, the Board of Directors adopted the 2015 Stock and Stock Option Plan (as amended, the "2015 Plan"). As of March 31, 2020, there were 8,985,260 shares that may be issued under the 2015 Plan. On May 5, 2020 the Board of Directors increased the number of shares that may be issued under the 2015 Plan to 58,985,260. On July 31, 2020 the Board of Directors increased the number of shares that may be issued under the 2015 Plan to 158,985,260. The Company has not and does not intend to present the 2015 Plan to stockholders for approval.

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

There were no stock grants and there were stock option grants for 67,500,000 shares of RespireRx's Common Stock during the three months and nine months ended September 30, 2020 and there were no stock grants or stock option grants in the three months and nine months ended September 30, 2019.

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 Summary of Significant Accounting Policies.

A summary of stock option activity for the nine months ended September 30, 2020 is presented below.

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in Years)
Options outstanding at December 31, 2019	4,287,609	$ 3.3798	4.98
Granted	67,500,000	0.0070	
Expired	(126,671)	(6.5757)	-
Options outstanding at September 30, 2020	71,660,938	$ 0.1969	4.85
Options exercisable at September 30, 2020	50,910,938	$ 0.2745	4.88

The exercise prices of common stock options outstanding and exercisable were as follows at September 30, 2020:

Exercise Price	Options Outstanding (Shares)	Options Exercisable (Shares)	Expiration Date
$ 0.0070	50,500,000	34,750,000	September 30, 2025
$ 0.0070	17,000,000	12,000,000	July 31, 2025
$ 0.7000	21,677	21,677	November 21, 2023
$ 1.1200	310,388	310,388	April 5, 2023
$ 1.2500	16,762	16,762	December 7, 2022
$ 1.3500	34,000	34,000	July 28, 2022
$ 1.4500	1,849,418	1,849,418	December 9, 2027
$ 1.4500	100,000	100,000	December 9, 2027
$ 2.0000	285,000	285,000	June 30, 2022
$ 2.0000	25,000	25,000	July 26, 2022
$ 3.9000	395,000	395,000	January 17, 2022
$ 4.5000	7,222	7,222	September 2, 2021
$ 5.7500	2,608	2,608	September 12, 2021
$ 6.4025	129,231	129,231	August 18, 2022
$ 6.4025	261,789	261,789	August 18, 2025
$ 6.8250	8,791	8,791	December 11, 2020
$ 7.3775	523,077	523,077	March 31, 2021
$ 8.1250	169,231	169,231	June 30, 2022
$ 13.9750	3,385	3,385	March 14, 2024
$ 15.9250	2,462	2,462	February 28, 2024
$ 19.5000	9,487	9,487	July 17, 2022
$ 19.5000	6,410	6,410	August 10, 2022
	71,660,938	50,910,938	

Based on a fair value of $0.0054 per share on September 30, 2020, there were no exercisable in-the-money common stock options as of September 30, 2020.

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 is a boutique investment banking firm specializing in the life sciences sector.

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

On March 21, 2020, July 13, 2020 and September 30, 2020, Dr. Lippa and Jeff E. Margolis, forgave an aggregate of $1,656,000 of accrued compensation and benefits and received Series H Preferred Stock. On September 30, 2020, Timothy Jones forgave $28,218 or accrued compensation and benefits and received Series H Preferred Stock. See Note 8. Commitments and Contingencies – *Significant Agreements and Contracts-Employment Agreements* for a more detailed description of these transactions.

8. Commitments and Contingencies

Pending or Threatened Legal Action and Claims

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 relates to late fees, seeking $100,259 plus 1.5% interest per month on outstanding unpaid invoices. Amid settlement discussions, the vendor stated on March 13, 2020 its intent to proceed to a default judgment against the Company, and the Company stated on March 14, 2020 its intent to continue settlement discussions. 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. The Company has recorded a liability to Sharp of $103,859 as of September 30, 2020.

Related to the Salamandra matter described in Note 5. Settlements and Payments Agreements, and preceding the settlement discussions, by letter dated February 5, 2016, the Company received a demand from a law firm representing Salamandra alleging an amount due and owing for unpaid services rendered. On January 18, 2017, following an arbitration proceeding, an arbitrator awarded the vendor the full amount sought in arbitration of $146,082. Additionally, the arbitrator granted the vendor attorneys' fees and costs of $47,937. All such amounts have been accrued at September 30, 2020 and December 31, 2019, including accrued interest at 4.5% annually from February 26, 2018, the date of the judgment, through September 30, 2020, totalling $22,186. See Note 5 for further information.

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 September 30, 2020 and December 31, 2019.

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 September 30, 2020 and December 31, 2019 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. See Note 5. Settlement and Payment Agreements for additional items and details.

Significant Agreements and Contracts

Equity Purchase Agreement and Registration Rights Agreement

On July 28, 2020, RespireRx and White Lion entered into an equity purchase agreement, dated July 28, 2020 (the "White Lion EPA") and a registration rights agreement (the "White Lion Registration Rights Agreement"). Pursuant to the White Lion EPA, White Lion agreed to invest up to $2,000,000 to purchase Common Stock at a purchase price of 85% of the lowest daily volume weighted average price of Common Stock for the five trading days prior to a given closing date.

Additionally, the Commitment Note was issued pursuant to the White Lion EPA and to induce White Lion to execute the White Lion EPA. See Note 4. Notes Payable—*Convertible Notes Payable*—Q3 2020 Convertible Notes—*Convertible Note and Equity Purchase Agreement with White Lion Capital, LLC* .

Pursuant to the Registration Rights Agreement, RespireRx is obligated to register for resale under the Securities Act the shares of Common Stock to be issued and sold to White Lion pursuant to the White Lion EPA. On October 14, 2020, Respire Rx filed a registration statement on Form S-1 with respect to the resale of up to 115,000,000 of the shares of Common Stock to be issued and sold to White Lion pursuant to the White Lion EPA, and on October 29, 2020, the registration statement became effective. The registration statement does not necessarily represent all of the shares that may be sold to White Lion in order to fulfill its purchase commitment of $2,000,000 under the White Lion EPA.

The shares of Common Stock to be issued and sold to White Lion pursuant to the White Lion EPA, or issuable upon conversion of the Commitment Note, and the Commitment Note are issued in reliance upon specific exemptions from the registration requirements of U.S. federal and state securities laws, which include Section 4(a)(2) of the Securities Act, and Rule 506 of Regulation D promulgated thereunder. White Lion represented to the Company under the White Lion EPA, among other representations, that it was an "accredited investor" as that term is defined in Rule 501(a) of Regulation D under the Securities Act.

The White Lion EPA terminates on the earlier of (i) June 30, 2021, (ii) the date on which White Lion has purchased $2,000,000 of Common Stock, (iii) the date on which the White Lion Registration Rights Agreement is no longer in effect, (iv) upon White Lion's material breach of the White Lion EPA, (v) in the event a voluntary or involuntary bankruptcy petition is filed with respect to the Company, or (vi) if a custodian is appointed for the Company for all or substantially all of its property or the Company makes a general assignment for the benefit of its creditors.

On October 28, 2020, RespireRx issued a purchase notice pursuant to the White Lion EPA to White Lion requiring that White Lion purchase 29,000,000 shares of Common Stock and deposit $195,750 into an escrow account maintained at an independent commercial bank. White Lion paid gross proceeds of $68,256 for such shares and RespireRx received net proceeds of $62,186 after paying $4,000 of upfront escrow fees and $2,070 of transaction fees. On November 13, 2020, RespireRx issued a purchase notice pursuant to the White Lion EPA to White Lion requiring White Lion to purchase 18,000,000 shares of Common Stock and on that date White Lion deposited $108,000 into an escrow account maintained at an independent commercial bank. Gross and net proceeds pursuant to this purchase notice will not be determinable until the close of business on November 23, 2020. See Note 9. Subsequent Events - *Issuances of Common Stock – White Lion Capital LLC*.

Consulting Agreements

DNA Healthlink, Inc. and Richard Purcell

Richard Purcell, the Company's Senior Vice President of Research and Development since October 15, 2014, provides his services to the Company on a month-to-month basis through his consulting firm, DNA Healthlink, Inc., through which the Company has

contracted for his services, for a monthly cash fee of $12,500. Stockholders' Deficiency. Cash compensation expense pursuant to this agreement totaled $37,500 and $112,500 for the three months and nine months ended September 30, 2020 and 2019, which is included in research and development expenses in the Company's consolidated statements of operations for such periods.

David Dickason

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. Mr. Dickason began providing services under this contract and began invoicing RespireRx with respect this contract in October 2020. Pursuant to this contract, on September 30, 2020, Mr. Dickason was granted an option to purchase 2,000,000 shares of RespireRx Common Stock at a price of $0.0054 per share, which option expires on September 30, 2025. The option vests 25% on each of December 31, 2020, March 31, 2021, June 30, 2021 and September 30, 2021.

Employment Agreements

Effective on May 6, 2020, Timothy Jones was appointed as RespireRx's President and Chief Executive Officer and entered into an employment agreement as of that date. In addition, Mr. Jones has continued to serve as a member of the Company's Board of Directors, a position he has held since January 28, 2020. On November 19, 2019, Mr. Jones became an advisor to the Company's Board of Directors, a position he held until January 27, 2020. Under the employment agreement, a provisional period of "at will" employment expired on July 31, 2020. Neither party terminated the employment agreement prior to July 31, 2020, and on that date all rights and obligations under the agreement were deemed effective, including with respect to the certain economic obligations of the Company upon termination of Mr. Jones' employment. The Board of Directors and Mr. Jones agreed to continue the employment agreement after the initial provisional period. The employment agreement has a termination date of September 30, 2023 and will automatically extend annually, upon the same terms and conditions, for successive periods of one year, unless either party provides written notice of its intention not to extend the term of the agreement at least 90 days prior to the applicable renewal date. On July 31, 2020, the employment agreement was amended. The terms of the amended agreement call for a base salary through September 30, 2020 of $300,000 per year which may remain accrued but unpaid at the discretion of the Board of Directors until such time as at least $2,500,000 has been raised. If $10,000,000 or more has been raised by September 30, 2021, Mr. Jones' base salary would be increased to $375,000 per year. Otherwise, it would remain at $300,000 annually unless increased pursuant to the employment agreement or by the Board of Directors. Mr. Jones' base salary is subject to cost of living increases. Since the expiration of the provisional period, Mr. Jones is eligible for a guaranteed bonus of $200,000 on October 31,2020, $200,000 on March 31, 2021 and $150,000 each six months thereafter on each March 31st and September 30th thereafter, unless the agreement is earlier terminated. The guaranteed bonus of $200,000 that was due on October 31, 2020 was not paid and is accrued and payable as of that date. At the end of the provisional period, pursuant to the employment agreement, Mr. Jones was granted an option grant for the purchase of 1,000,000 shares of the Company's common stock upon the expiration of the provisional period. In addition, until such time as the Company establishes comparable benefits, Mr. Jones is entitled to $1,200 per month on a tax equalized basis for health insurance and $1,000 per month on a tax equalized basis for term life insurance plus a disability policy. Mr. Jones is entitled to be reimbursed for business expenses. Mr. Jones would be entitled to a $12,000 tax equalized annual automobile allowance after the Company has raised $10,000,000. In addition, on July 31, 2020, the Board of Directors granted Mr. Jones a discretionary bonus that was a grant of an option to purchase 16,000,000 shares of common stock expiring on July 31, 2025 at an exercise price equal to the closing price of the Company's common stock on July 31, 2020 of $0.0072, 25% of which vested immediately, 25% of which vested on September 30, 2020, and 25% of which will vest on each of December 31, 2020 and March 31, 2021. Upon commencement of Mr. Jones' employment agreement on May 6, 2020, Mr. Jones was no longer eligible to receive fees for his participation as a member of the Board of Directors. From January 1, 2020 to January 27, 2020, while Mr. Jones was an advisor to the Board of Directors, the Company accrued $3,484 for Mr. Jones' advisory fees. From January 28, 2020 to May 5, 2020, the Company accrued $16,734 of fees for Mr. Jones' participation as a member of the Board of Directors and $0 thereafter. From May 6, 2020 to September 30, 2020, the Company accrued $122,941 for Mr. Jones' compensation and related benefits. These amounts are included in accounts payable and accrued expenses and in accrued compensation in the Company's Condensed Consolidated Balance Sheet as of September 30, 2020. On September 30, 2020, Mr. Jones, pursuant to an exchange agreement, forgave $28,218 of accrued Board of Directors and other fees owed to him in exchange for 28.218 shares of Series H Preferred Stock which, on the same day, was converted into 4,409,063 shares of Common Stock and a warrant to purchase 4,409,063 shares of RespireRx Common Stock.

Effective May 6, 2020, with the appointment of Timothy Jones as RespireRx's President and Chief Executive Officer, Dr. Lippa resigned the interim officer positions of Interim Chief Executive Officer and Interim President, positions that Dr. Lippa has assumed on October 12, 2018 after the resignation of Dr. James Manuso on September 30, 2018. Dr. Lippa continues to serve as RespireRx's Executive Chairman and as a member of the Board of Directors as well as the Company's Chief Scientific Officer. Dr. Lippa has been granted stock options on several occasions and is eligible to receive additional awards under RespireRx's 2014 Plan and 2015 Plan at the discretion of the Board of Directors. Dr. Lippa did not receive any option to purchase shares of common stock during the three month and nine month periods ended September 30, 2020. Additional information with respect to the stock options granted to Dr. Lippa is provided at Note 6 Stockholders' Deficiency. Dr. Lippa is also entitled to receive, until such time as RespireRx establishes a group health plan for its employees, $1,200 per month, on a tax-equalized basis, as additional compensation to cover the cost of health coverage and up to $1,000 per month, on a tax-equalized basis, as reimbursement for a term life insurance policy and disability insurance policy. Dr. Lippa is also entitled to be reimbursed for business expenses. Cash compensation inclusive of employee benefits accrued pursuant to this agreement totaled $84,900 and $254,700 for each of the three months and nine months ended September 30, 2020 and 2019, respectively. After forgiveness of the compensation described below, the accrued compensation payable to Dr. Lippa at September 30, 2020 was $165,800. Dr. Lippa's cash compensation is included in accrued compensation and related expenses in the Company's condensed consolidated balance sheet at September 30, 2020 and in research and development expenses in the Company's condensed consolidated statement of operations for the three months and nine months ended September 30, 2020 and 2019. Dr. Lippa does not receive any additional compensation for serving as Executive Chairman and on the Board of Directors. On July 13, 2020, pursuant to an exchange agreement, Dr. Lippa forgave $600,000 of accrued compensation and benefits and in exchange received 600 shares of Series H Preferred Stock. On September 30, 2020, pursuant to an additional exchange agreement, Dr. Lippa forgave $100,000 of accrued compensation and benefits and in exchange received 100 shares of Series H Preferred Stock. Between July 13, 2020 and September 30, 2020, Dr. Lippa earned 2.6333333 shares of Series H Preferred Stock as dividends in-kind. On July 13, 2020 and September 30, 2020, Dr. Lippa contributed all of his Series H Preferred Stock to a family trust. On September 30, 2020, the family trust converted all of its Series H Preferred Stock into 109,786,458 shares of RespireRx Common Stock and a warrant to purchase 109,786,458 shares of Common Stock.

Jeff E. Margolis currently serves as the Company's Senior Vice President, Chief Financial Officer, Treasurer and Secretary. On August 18, 2015, the Company entered into an employment agreement with Mr. Margolis in his role at that time as Vice President, Secretary and Treasurer. Pursuant to the agreement, which was for an initial term through September 30, 2016 and later amended (and which automatically extended on September 30, 2016, 2017, 2018 and 2019 and will automatically extend annually, upon the same terms and conditions for successive periods of one year, unless either party provides written notice of its intention not to extend the term of the agreement at least 90 days prior to the applicable renewal date). Mr. Margolis receives an annual base salary of $300,000, and is eligible to receive performance-based annual bonus awards based upon the achievement of annual performance goals established by the Board of Directors in consultation with the executive prior to the start of such fiscal year. Additionally, Mr. Margolis has been granted stock options on several occasions and is eligible to receive additional awards under the Company's Plans at the discretion of the Board of Directors. Mr. Margolis is also entitled to receive, until such time as the Company establishes a group health plan for its employees, $1,200 per month, on a tax-equalized basis, as additional compensation to cover the cost of health coverage and up to $1,000 per month, on a tax-equalized basis, as reimbursement for a term life insurance policy and disability insurance policy, which $1,000 per month obligation has been waived by Mr. Margolis until Mr. Margolis notifies the Company of the rescission of the waiver. Mr. Margolis is also entitled to be reimbursed for business expenses. Additional information with respect to the stock options granted to Mr. Margolis is provided at Note 6 Stockholders' Deficiency. Recurring cash compensation accrued pursuant to this amended agreement totaled $80,400 and $241,200 for the three months and nine months ended September 30, 2020 and 2019, respectively. After forgiveness of the compensation described below, the accrued compensation payable to Mr. Margolis at September 30, 2020 was $161,800. Mr. Margolis' cash compensation is included in accrued compensation and related expenses in the Company's condensed consolidated balance sheet as of September 30, 2020 and December 31, 2019, and in general and administrative expenses in the Company's condensed consolidated statement of operations. Mr. Margolis does not receive any additional compensation for serving on the Company's Board of Directors. On July 13, 2020, pursuant to an exchange agreement, Mr. Margolis forgave $500,000 of accrued compensation and benefits and in exchange received 500 shares of Series H Preferred Stock. On September 30, 2020, pursuant to an additional exchange agreement, Mr. Margolis forgave $150,000 of accrued compensation and benefits and in exchange received 150 shares of Series H Preferred Stock. Between July 13, 2020 and September 30, 2020, Mr. Margolis earned 2.194444 shares of Series H Preferred Stock as dividends in-kind. On July 13, 2020 and September 30, 2020, Mr. Margolis contributed all of his Series H Preferred Stock to three family trusts. On September 30, 2020, the family trusts converted all of their Series H Preferred Stock into 101,905,382 shares of RespireRx Common Stock and a warrant to purchase 101,905,382 shares of Common Stock.

The employment agreements between the Company and each of Dr. Lippa and Mr. Margolis (prior to the 2017 amendment), respectively, provided that the payment obligations associated with the first year base salary were to accrue, but no payments were to be made, until at least $2,000,000 of net proceeds from any offering or financing of debt or equity, or a combination thereof, was received by the Company, at which time scheduled payments were to commence. Dr. Lippa and Mr. Margolis (who are each also directors of the Company), have each agreed, effective as of August 11, 2016, to continue to defer the payment of such amounts indefinitely, until such time as the Board of Directors of the Company determines that sufficient capital has been raised by the Company or is otherwise available to fund the Company's operations on an ongoing basis.

University of Illinois 2014 Exclusive License Agreement

On June 27, 2014, the Company entered into an Exclusive License Agreement (the "2014 License Agreement") with the University of Illinois. The 2014 License Agreement granted the Company (i) exclusive rights to several issued and pending patents in several 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, 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, 2019, was extended to June 30, 2020 and further extended to July 7, 2020 when the obligation was paid. 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 the U.S. Food and Drug Administration (the "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.

During each of the three months and nine months ended September 30, 2020 and 2019, the Company recorded charges to operations of $25,000, respectively, with respect to its 2020 and 2019 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 nine months ended September 30, 2020 and 2019, respectively.

UWMRF Patent License Agreement

On August 1, 2020, RespireRx exercised its option pursuant to its option agreement dated March 2, 2020, between RespireRx and UWM Research Foundation, an affiliate of the University of Wisconsin-Milwaukee ("UWMRF"). Upon exercise RespireRx and UWMRF executed the UWMRF Patent License Agreement effective August 1, 2020 pursuant to which RespireRx licensed the identified intellectual property.

Under the UWMRF Patent License Agreement, 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.

Noramco Inc./Purisys, LLC - 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. Noramco subsequently assigned this agreement (as assigned, the "Purisys Agreement") to its subsidiary, Purisys, LLC ("Purisys"). Under the terms of the Purisys Agreement, Purisys 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.

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 adjustments and agreed to Purisys's 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.

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

In March 2011, the Company entered into a new agreement with Bausch to re-acquire 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 NDA 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 these compounds for respiratory depression.

Vendor Exchange Agreements

On September 30, 2020, RespireRx entered into exchange agreements with two vendors to settle certain accounts payable with such vendors. Pursuant to one exchange agreement, RespireRx issued 135.65498 shares of Series H Preferred Stock to a designee of one vendor, which vendor and designee are related parties, to settle $135,659 of accounts payable to such vendor. The vendor designee then converted on the same day, all 135.65948 Series H Preferred Shares into 21,196,794 shares of Common Stock and 21,196,794 warrants to purchase Common Stock. Since the vendor and its designee are both related parties, there was no gain or loss on the settlement. Pursuant to the other exchange agreement, RespireRx issued 105.45 shares of Series H Preferred Stock to two designees of such vendor to settle $105,450 of accounts payable to such vendor. Such vendor's designees then converted on the same day, all 105.45 shares of Series H Preferred Stock into 16,476,563 shares of Common Stock and 16,476,563 warrants to purchase Common Stock. Since the vendor and its designees were not related parties, a loss on the settlement of $65,906 was recorded.

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 September 30, 2020, aggregating $3,230,470. License agreement amounts included in the 2020 column represents amounts contractually due from October 1, 2020 through December 31, 2020 (three months) and in each of the subsequent years, represents the full year. Employment agreement amounts included in the 2020 column represent amounts contractually due from October 1, 2020 through September 30, 2021 (one year) and in one case through September 30, 2023 when such contracts expire unless extended pursuant to the terms of the contracts.

		Payments Due By Year				
	Total	2020	2021	2022	2023	2024
License agreements	$ 485,370	$ 25,000	$ 115,092	$ 115,093	$ 130,185	$ 100,000
Employment agreements (1)	2,745,100	450,200	1,100,600	639,600	554,700	-
Total	$3,230,470	$ 475,200	$1,215,692	$ 754,693	$ 684,885	$ 100,000

(1) The payment of amounts related to Dr. Lippa and Mr. Margolis have been deferred indefinitely, as described above at "Employment Agreements." The payment amounts to Mr. Jones have been deferred pending the Company achieving certain financing thresholds as described above at "Employment Agreements." The 2020 amounts include three months of employment agreement obligations for Dr. Lippa, Mr. Jones and Mr. Margolis as their employment contracts renewed on September 30, 2020 and the 2020 obligations include the three months of obligations through December 30, 2020. In the case of Mr. Jones, the obligations extend through the first renewal date of his employment contract which is September 30, 2023. Also, in the case of Mr. Jones, guaranteed bonus obligations are included in the periods in which such amounts are due.

9. Subsequent Events

Issuances of Common Stock

Registration Statement on Form S-1

On October 14, 2020, RespireRx filed a registration statement on Form S-1 pursuant to the White Lion Registration Rights Agreement naming White Lion as the selling stockholder and registering the resale of up to 115,000,000 shares of Common Stock which represents a portion of the $2,000,000 purchase commitment under the White Lion EPA. The registration statement on Form S-1 was declared effective on October 28, 2020.

White Lion Capital, LLC

On October 28, 2020 RespireRx issued a purchase notice pursuant to the White Lion EPA to White Lion requiring that White Lion purchase 29,000,000 shares of Common Stock and deposit $195,750 into an escrow account maintained at an independent commercial bank. White Lion paid gross proceeds of $68,256 for such shares and RespireRx received net proceeds of $62,186 after paying $4,000 of upfront escrow fees and $2,070 of transaction fees. On November 13, 2020, RespireRx issued a purchase notice pursuant to the White Lion EPA to White Lion requiring White Lion to purchase 18,000,000 shares of Common Stock and on that date White Lion deposited $108,000 into an escrow account maintained at an independent commercial bank. A closing is scheduled for November 24, 2020.

Convertible Note Repayment

Power Up Lending Group LLC

On October 22, 23 and 26, 2020, Power Up converted the outstanding principal amount of $53,000 and all accrued and unpaid interest totaling $3,180 for a total of $56,180, related to the April 2020 Note into 28,804,407 shares of Common Stock. Upon the last of these conversions the April 2020 Note was deemed repaid and terminated.

Schedule 14A

Notice of Special Meeting of Stockholders

On October 30, 2020, RespireRx filed a definitive proxy statement on Schedule 14A indicating that a Special Meeting of the Stockholders of RespireRx will be held virtually via a live webcast on November 24, 2020 at 9:00am Eastern Time to approve (i) an amendment to the Certificate of Incorporation to effect, at the discretion of our Board of Directors, a ten-to-one (10:1) reverse stock split of all of the outstanding shares of our Common Stock, and (ii) an amendment to the Certificate of Incorporation to increase the number of RespireRx's authorized shares of stock at 2,005,000,000 (two billion five million) shares consisting of 2,000,000,000 (two billion) shares designated as Common Stock and 5,000,000 (five million) shares designated as preferred stock. If both proposals are approved by stockholders at the special meeting, RespireRx plans to file one or more amendments to its Certificate of Incorporation to effect both of these proposals as soon as practical. The increase in the authorized number of shares of Common Stock would allow the Company to remain in compliance with contractual reserve requirements following the November 25, 2020 expiration of the waivers of such requirements.

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

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

Overview

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 animal 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), including dronabinol (a synthetic form of Δ9-tetrahydrocannabinol ("Δ9-THC")), which acts upon the nervous system's endogenous cannabinoid receptors, and

(ii) our neuromodulators platform (which we refer to as EndeavourRx) is made up of two programs: (a) our ampakines program, including proprietary compounds that are positive allosteric modulators ("PAMs") of AMPA-type glutamate receptors to promote neuronal function and (b) our GABAkines program, including proprietary compounds that are PAMs of $GABA_A$ receptors, 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").

In order to facilitate our business activities and product development, we are organizing our drug platforms into two separate business units. The business unit focused on pharmaceutical cannabinoids is named ResolutionRx and the business unit focused on neuromodulators is named EndeavourRx. It is anticipated that the Company will use, at least initially, its management personnel to provide management, operational and oversight services to these two business units.

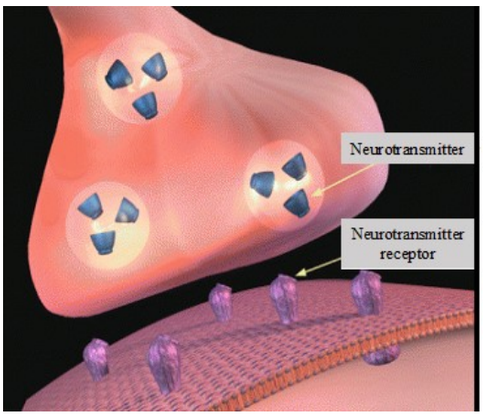
Management intends to organize our ResolutionRx and EndeavourRx business units into two subsidiaries: (i) a ResolutionRx subsidiary, into which we intend to contribute our pharmaceutical cannabinoid platform and its related tangible and intangible assets and certain of its liabilities and (ii) an EndeavourRx subsidiary, into which we plan to contribute our neuromodulator platform, including both the AMPAkine and GABAkine programs and their related tangible and intangible assets and certain of their liabilities.

Management believes that there are advantages to separating these platforms formally into newly formed subsidiaries, including but not limited to optimizing their asset values through separate finance channels and making them more attractive for capital raising as well as for strategic deal making.

The Company is also engaged in a number of 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, transacting 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 and that if it does, that the terms will be favorable to the Company.

Neurotransmission

RespireRx is developing drugs to modify neurotransmission and create advanced treatments for disorders with high unmet needs. Neurotransmission is the basic process in the brain by which specialized nerve cells called neurons communicate information with each other.



As illustrated in this figure, during neurotransmission, neurons release chemicals called neurotransmitters which attach to receptors, very specific protein structures residing on adjacent neurons. This enables neurons to communicate with one another by either increasing or decreasing the excitability of the neuron receiving the communication. For example, glutamate is the primary excitatory neurotransmitter in the brain, while gamma-amino-butyric acid ("GABA") is the primary inhibitory neurotransmitter. Neurons also contain receptors for the brain's own natural cannabinoid (endocannabinoid) substances.

ResolutionRx – Pharmaceutical Cannabinoids

Background

Cannabinoids are pharmacologically active substances found within the marijuana plant. Due to the liberalization of state laws regulating the use and sales of marijuana over the last 5 years, a major industry has grown around the commercialization of marijuana for both medical and recreational use. However, while personal marijuana use has been legalized in certain states, it still is not legal under federal statutes and regulations. The medical use of any pharmacological agent must be approved by the U.S Food and Drug Administration ("FDA") and, to date, the FDA has not recognized or approved the marijuana plant as medicine nor is it federally legal to sell products that contain cannabinoids as drugs or dietary supplements without its approval.

Worldwide clinical research efforts have established the cannabinoid class of compounds as *bona fide* pharmaceutical products, or "pharmaceutical cannabinoids," which are being developed and commercialized according to FDA regulatory and industry guidelines. Scientific research and commercial development to date has focused primarily on two major cannabinoids, THC and cannabidiol ("CBD"). This research and development began in 1985 when dronabinol, a synthetic form of THC, was approved as Marinol® by the FDA for the treatment of AIDS-related anorexia and later for the treatment of chemotherapy-induced nausea and vomiting. Dronabinol, in its Marinol® formulation as well as numerous generic formulations, is available in 2.5 mg, 5 mg, and 10 mg capsules, with a maximum labelled dosage of 20 mg/day for the AIDS indication, or 15 mg/m^2 per dose for chemotherapy-induced nausea and vomiting.

This initial breakthrough subsequently led to the recent FDA approval of Epidiolex®, a proprietary oral solution of highly purified, plant-derived CBD sold by GW Pharmaceuticals plc ("GW Pharma") for the treatment of certain rare, treatment-resistant forms of epilepsy. Nabiximol®, an oromucosal spray containing THC and CBD, was approved under the tradename Sativex® by applicable regulatory authorities in 25 countries outside the United States and is sold by GW Pharma in those countries for the treatment of multiple sclerosis.

The commercialization of these pharmaceutical cannabinoids has opened the door to an expanding market sector. In order to capitalize upon this opportunity, the Company is implementing an internal restructuring plan by forming ResolutionRx as a stand-alone business focused on the pharmaceutical cannabinoid market. ResolutionRx's initial primary focus has been and will be the re-purposing of dronabinol using new proprietary formulations and therapeutic indications. Because dronabinol already is an approved drug, we intend to use publicly available information, particularly safety data, in support of a 505(b)(2) New Drug Application ("NDA"), a much more rapid route to FDA approval than a standard 505(b)(1) NDA.

OSA and Existing Treatments

The Company is developing dronabinol for the treatment of OSA, a sleep-related breathing disorder that afflicts an estimated 29 million people in the United States according to the American Academy of Sleep Medicine ("AASM"), and an additional 26 million in Germany and 8 million in the United Kingdom, as presented at the European Respiratory Society's annual Congress in Paris, France in September 2018. OSA involves a decrease or complete halt in airflow despite an ongoing effort to breathe during sleep. When the muscles relax during sleep, soft tissue in the back of the throat collapses and obstructs the upper airway. OSA remains significantly under-recognized, as only 20% of cases in the United States according to the AASM and 20% of cases globally have been properly diagnosed. About 24 percent of adult men and 9 percent of adult women are believed to have the breathing symptoms of OSA with or without daytime sleepiness. OSA significantly impacts the lives of sufferers who do not get enough sleep; their quality of sleep is deteriorated such that daily function is compromised and limited. OSA is associated with decreased quality of life, significant functional impairment, and increased risk of road traffic accidents, especially in professions like road and rail transportation and shipping.

Research has established links between OSA and several important co-morbidities, including hypertension, type II diabetes, obesity, stroke, congestive heart failure, coronary artery disease, cardiac arrhythmias, and even early mortality. The consequences of undiagnosed and untreated OSA are medically serious and economically costly. According to the AASM, the estimated economic burden of OSA in the United States is approximately $162 billion annually. All current treatment options have serious drawbacks. We believe that a new drug therapy that is effective in reducing the medical and economic burden of OSA would have major benefits for the treatment of this costly disease indication.

Continuous Positive Airway Pressure ("CPAP") is the most common treatment for OSA. CPAP devices work by blowing pressurized air into the nose (or mouth and nose), which keeps the pharyngeal airway open. Patients must use the device whenever they sleep. Reduction of the apnea/hypopnea index ("AHI") is the standard objective measure of therapeutic response in OSA. Apnea is the cessation of breathing for 10 seconds or more and hypopnea is a reduction in breathing. AHI is the sum of apnea and hypopnea events per hour. In the sleep laboratory, CPAP is highly effective at reducing AHI. However, the device is cumbersome and difficult for many patients to tolerate. Most studies describe that 25-50% of patients refuse to initiate or completely discontinue CPAP use within the first several months and that most patients who continue to use the device do so only intermittently.

Oral devices may be an option for patients who cannot tolerate CPAP. Several dental devices are available. The cost of these devices tends to be high and side effects associated with them include night-time pain, dry lips, tooth discomfort, and excessive salivation.

Patients with clinically significant OSA who cannot be treated adequately with CPAP or oral devices may elect to undergo surgery, the most common form of which involves the removal of excess tissue in the throat to make the airway wider. Patients who undergo surgery for the treatment of OSA risk complications. Surgery is often unsuccessful, and at present, no method exists to reliably predict therapeutic outcome from surgery.

Recently, another surgical option has become available based on upper airway stimulation. It is a combination of an implantable nerve stimulator and an external remote controlled by the patient. The implanted device stimulates the hypoglossal nerve, which controls the tongue, with every attempted breath, regardless of whether such stimulation is needed for that breath. The device is turned on at night and off in the morning by the patient with the remote.

The Company's Research Efforts Regarding the Treatment of OSA with Cannabinoids

The Company conducted a 21-day, randomized, double-blind, placebo-controlled, dose escalation Phase 2A clinical study in 22 patients with OSA, in which dronabinol produced a statistically significant reduction in AHI, the primary therapeutic end-point, and was observed to be safe and well tolerated, with the frequency of side effects no different from placebo. This clinical trial provided data supporting the submission of patent applications claiming unique dosage strengths, blood levels and controlled release formulations optimized for use in the treatment of OSA. If approved, these pending patents would extend market exclusivity until at least 2031.

With approximately $5 million in funding from the National Heart, Lung and Blood Institute of the National Institutes of Health ("NIH"), Dr. David Carley of the University of Illinois at Chicago ("UIC"), along with his colleagues at UIC and Northwestern University, completed a Phase 2B multi-center, double-blind, placebo-controlled clinical trial of dronabinol in patients with OSA. This study, named "Pharmacotherapy of Apnea with Cannabimimetic Enhancement" ("PACE") replicated the earlier Phase 2A study. The authors published in January 2018 in the journal SLEEP and reported that, in a dose-dependent fashion, treatment with 2.5 mg and 10 mg of dronabinol once per day at night, significantly reduced, compared to placebo, AHI during sleep in 56 evaluable patients with moderate to severe OSA who completed the study. Additionally, treatment with 10 mg of dronabinol significantly improved daytime sleepiness as measured by the Epworth Sleepiness Scale and achieved the greatest overall patient satisfaction. As in the previous Phase 2A study, dronabinol was observed to be safe and well tolerated, with the frequency of side effects no different from placebo. The Company did not manage this clinical trial, which was funded entirely by the National Heart, Lung and Blood Institute of NIH.

The Opportunity to Improve Dronabinol Formulations

Dronabinol is currently marketed as a soft gelatin capsule that suffers from several major deficiencies.

First, dronabinol exhibits poor and erratic absorption. Δ9-THC is not water soluble. The market-dominant commercial gelcap formulation of dronabinol is currently formulated as a sesame oil-based liquid within a soft gelatin capsule. The absorption of dronabinol after oral administration is poor and highly variable with some patients achieving very high levels and others achieving very low levels. This erratic absorption may be responsible for the variable therapeutic responses observed in dronabinol clinical trials. Syndros®, on the other hand, is formulated as a solution in dehydrated alcohol, polyethylene glycol and other materials and exhibits its own challenges and deficiencies, including but not limited to it being classified as a Schedule II drug by the U.S. Drug Enforcement Administration (the "DEA") as compared to the capsule formulation that is classified as a Schedule III drug.

Second, dronabinol is rapidly and extensively (approximately 80%) metabolized upon first pass through the liver, resulting in low blood levels. Additionally, dronabinol has a relatively short half-life (approximately 3 – 4 hours) and, in its present formulation, is not optimally suited for therapeutic indications requiring blood levels to be sustained for 6 hours or longer.

Third, in order to achieve sustained, therapeutic blood levels, we have found it necessary to use higher doses of dronabinol in our OSA clinical trials. For example, over an 8-hour period, the 2.5 mg and 10 mg doses produced therapeutically equivalent effects during the first 4 hours, but only the 10 mg dose produced therapeutic effects during the second 4 hours. Unfortunately, the 10 mg dose produces a higher occurrence of side effects than the 2.5 mg dose (as described in the Marinol® package insert). We anticipate focusing on new formulations that would achieve the blood levels produced by the lower doses for a sustained time period, resulting in the desired therapeutic effect(s) while minimizing undesirable side effects.

The Company's Cannabinoid Intellectual Property Rights

In order to expand RespireRx's respiratory disorders program and develop cannabinoids for the treatment of OSA, RespireRx acquired 100% of the issued and outstanding equity securities of Pier Pharmaceuticals, Inc. ("Pier") effective August 10, 2012 pursuant to an Agreement and Plan of Merger. Pier was a clinical stage pharmaceutical company developing a pharmacologic treatment for OSA and had been engaged in research and clinical development activities.

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

The 2007 License Agreement was terminated effective March 21, 2013 and the Company entered into a new license agreement (the "2014 License Agreement") with UIC on June 27, 2014, the material terms of which were substantially similar to the 2007 License Agreement. The 2014 License Agreement grants the Company, among other provisions, exclusive rights: (i) to practice certain patents in the United States, Germany and the United Kingdom, as defined in the 2014 License Agreement, that are held by UIC; (ii) to identify, develop, make, have made, import, export, lease, sell, have sold or offer for sale any related licensed products; and (iii) to grant sub-licenses of the rights granted in the 2014 License Agreement, subject to the provisions of the 2014 License Agreement. The Company is required under the 2014 License Agreement, among other terms and conditions, to pay UIC a license fee, royalties, patent costs and certain milestone payments.

The 2014 License Agreement obligates the Company to pay UIC a license fee, royalties, patent costs and certain milestones. Royalty payments include 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, 2019, was extended to and paid on July 7, 2020. 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 in a Phase III human clinical trial anywhere in the world. $500,000 will be due within five days after the first NDA filing with the FDA, as defined below, or a foreign equivalent. $1,000,000 will be due within twelve months of the first commercial sale. One-time and annual royalty payments may also become due and payable. 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. For each of the three month and nine month periods ended September 30, 2020 and 2019, the Company recorded a charge to operations of $25,000 and $75,000, respectively, as its minimum annual royalty obligation, which is included in research and development expenses in the Company's condensed consolidated statements of operations for the three months and nine months ended September 30, 2020 and 2019, respectively.

RespireRx has exclusive rights to issued and pending patents claiming cannabinoid compositions and methods for treating cannabinoid-sensitive disorders, including sleep apnea, pain, glaucoma, muscular spasticity, anorexia and other conditions. In October 2019, we filed a continuation-in-part for our pending patent that describes and claims novel doses, controlled release compositions and methods of use for cannabinoids, as well as a new U.S. provisional patent application further disclosing novel dosage and controlled release compositions and methods of use for cannabinoids, alone or in combination, including with cannabinoid and non-cannabinoid molecules. Specific claims describe low dosage strengths and controlled release formulations for attaining a therapeutic window of cannabinoid blood levels that produce the desired therapeutic effect(s) for a controlled period of time, while minimizing undesirable side effects. Certain original patents were filed by RespireRx and are now included in the 2014 License Agreement. See Note 8. Commitments and Contingencies—*University of Illinois 2014 Exclusive License Agreement* in the notes to condensed consolidated financial statements as of September 30, 2020 for more information on the 2014 License Agreement. While no assurance can be provided that the claims in this continuation-in-part or the U.S. provisional patent application will be allowed in whole or in part, or that the patents will ultimately issue, we believe that these new filings, if allowed, will provide market protections through at least 2031.

We believe our intellectual property initiatives may afford expanding strategic options and market exclusivity in the burgeoning pharmaceutical cannabinoid business sector. New cannabinoid formulation technology is headed in the direction of enhanced absorption. These technologies, including nano- and micro-emulsions and thin films, have been shown to bypass the normal route of absorption and liver metabolism of cannabinoids, thus dramatically increasing blood levels and allowing for the use of low doses. Similarly, technologies may be used to achieve a controlled release of dronabinol, and we believe that our pending patent priority relating back to 2010 predates the efforts of others seeking to develop low-dose or extended release formulations of cannabinoids. Thus, to the extent that new technologies result in lower doses and/or controlled release formulations, we believe they would infringe on our pending patents once issued, not only for use in the treatment of OSA but potentially a wide variety of other indications as well.

Data from our Phase 2 clinical trials has allowed us to design new proprietary formulations of dronabinol, disclosed in our patent filings and optimized for the treatment of not only OSA, but also other indications. New formulation technology has emerged potentially allowing for the creation of a proprietary dronabinol formulation with optimized dose and duration of action for treating OSA. We have discussions in progress with a number of companies that have existing cannabinoid formulation technologies, expertise, and licensure capabilities, which may lead to the development of a proprietary formulation of dronabinol for RespireRx based on our pending patents for low-dose and extended release dronabinol and may lead to the development of a marketable proprietary formulation of dronabinol. In support of this formulation program, David Dickason joined the Company as Senior Vice-President Preclincial Product Development on September 15, 2020. Mr. Dickason has an extensive background in product formulation development. We believe that the development of a novel, proprietary formulation of dronabinol would only extend time to market entry by approximately 12 months compared to the market entry with a currently available generic soft gel capsule, but would dramatically extend market exclusivity; however, no assurance can be provided that any of the formulation technologies that we are currently analyzing will result in viable products or that formulation agreements will be consummated on terms acceptable to us. The failure to consummate a formulation agreement would materially and adversely affect the Company.

Proposed Regulatory Process

In conjunction with its management and consultants, the Company intends to file a new NDA under Section 505(b)(2) of the Federal Food, Drug and Cosmetic Act (as amended, the "FDCA" and such NDA a "505(b)(2) NDA"), claiming the efficacy and safety of our proposed proprietary dronabinol formulation in the treatment of OSA. We believe the use of dronabinol for the treatment of OSA is a novel indication for an already approved drug, making it eligible for a 505(b)(2) NDA, as opposed to the submission and approval of a full 505(b)(1) NDA.

The 505(b)(2) NDA was created by the Hatch-Waxman Act, as amended (the "Hatch-Waxman Act"), which amended the FDCA to help avoid unnecessary duplication of studies already performed on a previously approved drug. As amended, the FDCA gives the FDA express permission to rely on data not developed by the NDA applicant. Accordingly, a 505(b)(2) NDA contains full safety and effectiveness reports but allows at least some of the information required for NDA approval, such as safety and efficacy information on the active ingredient, to come from studies not conducted by or for the applicant. This can result in a less expensive and faster route to approval, compared with a traditional development path, such as 505(b)(1), while still allowing for the creation of new, differentiated products. The 505(b)(2) NDA regulatory path offers the applicant market protections, such as market exclusivity, under the Hatch-Waxman Act and the rules promulgated thereunder. Other, international regulatory routes are available to pursue proprietary formulations of dronabinol and would provide further market protections. For example, in Europe, a regulatory approval route similar to the 505(b)(2) pathway is the hybrid procedure based on Article 10 of Directive 2001/83/EC.

We have worked with regulatory consultants who will assist with FDA filings and regulatory strategy. If we can secure sufficient financing, of which no assurance can be provided, we anticipate requesting a pre-IND (pre-Investigational New Drug application) meeting with the FDA. This meeting also could create the type of dialogue with the FDA that is normally communicated at an end-of-Phase 2 meeting. The FDA responses to this meeting will be incorporated into an IND.

If we can secure sufficient financing and successfully create a proprietary formulation of Δ 9-THC, of which no assurance can be provided, we plan to propose conducting the appropriate clinical studies with our proprietary controlled release formulation in OSA patients to determine safety, pharmacokinetics ("PK") and efficacy, as well as a standard Phase 1 clinical study to determine potential abuse liability. When a Phase 3 study is required for a 505(b)(2), usually only one study with fewer patients is necessary versus the two, large scale, confirmatory studies generally required for the standard 505(b)(1) NDA. While no assurance can be provided, with an extensive safety database tracking chronic, long-term use of Marinol® and generics, we believe that the FDA should not have major safety concerns with dronabinol in the treatment of OSA.

The Company has worked with the investigators who conducted the Phase 2B clinical trial and our Clinical Advisory Panel to design a draft Phase 3 protocol that, based on the experience and results from the Phase 2A and Phase 2B trials, we believe will provide sufficient data for FDA approval of a RespireRx dronabinol controlled release formulation for OSA. The current version of the protocol is designed as a 90-day randomized, blinded, placebo-controlled study of dronabinol in the treatment of OSA. Depending on feedback from the FDA, the Company estimates that the Phase 3 trial would require between 120 and 300 patients at 15 to 20 sites, and take 18 to 24 months to complete, at a cost of between $10 million and $14 million.

We believe our rights under the Purisys Agreement would help facilitate regulatory approval. See "Information with Respect to our Company—Description of Business—*Manufacturing*" for information on the Purisys Agreement. Under the Purisys Agreement, Purisys has agreed to (i) provide all of the API estimated to be needed for the clinical development process for first- and second-generation products, three validation batches for NDA filings and adequate supply for the initial inventory stocking for the wholesale and retail channels, subject to certain limitations, (ii) maintain or file valid 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 DEA meetings as appropriate and as related to the API.

In consideration for these supplies and services, the Company has agreed to (i) purchase exclusively from Purisys, during the commercialization phase, all API for these products at a pre-determined price subject to certain producer price adjustments and (ii) allow Purisys's participation in the economic success of the commercialized products up to the earlier of the achievement of a maximum dollar amount or the expiration of a period of time.

Large Commercial Opportunity

As a serious public health issue, the important need for diagnosing and ultimately treating OSA has recently been highlighted by the FDA clearance of several sleep apnea home test kits that are now third party reimbursed. Further highlighting this need, CVS Health Corporation (NYSE: CVS) announced the implementation of a program to diagnose and treat OSA initially within their own in-store, walk-in MinuteClinics. If implemented throughout their HealthHUB store network, the number of people diagnosed with sleep apnea and eligible for treatment should increase dramatically. Fitbit, Inc., (NYSE: FIT), a health oriented smart watch company is seeking clearance from the FDA to diagnose sleep apnea. We believe that the combination of more efficient and patient friendly diagnostic procedures and, ultimately, pharmaceutical treatments such as those we are developing will encourage more patients to seek diagnosis and treatment. As noted above, there are approximately 29 million OSA patients in the United States and an additional 26 million in Germany and 8 million in the United Kingdom. There are currently no drugs approved for the treatment of OSA.

EndeavourRx – Neuromodulators

Background

As described above, during the neurotransmission process, neurons release neurotransmitters that attach to specific receptors residing on adjacent neurons, enabling them to communicate with one another and produce excitatory or inhibitory effects. For example, glutamate is the primary excitatory neurotransmitter in the brain and GABA is the primary inhibitory neurotransmitter. While the neurotransmitter attachment site on each of these receptors does not change, the receptor protein subunit structures can vary so that the receptors can produce a variety of effects. With the AMPA glutamate receptor, the binding of glutamate or an artificial agonist to its attachment site causes a change in the structure of the AMPA receptor resulting in an increased excitability. Likewise, in the case of the $GABA_A$ receptor, the binding of GABA or an artificial agonist to its attachment site causes a change in the structure of the $GABA_A$ receptor ion channel and increases the flow of chloride ions (negatively charged anion) into the cell, resulting in a decreased excitability.

Neurotransmitter receptor proteins also may contain auxiliary "allosteric" binding sites, which are located adjacent to the agonist binding sites at which neurotransmitters act. Unlike neurotransmitters, neuromodulators are drugs that act at these allosteric binding sites rather than directly at the agonist binding site. They can act either as PAMs, which enhance, or as negative allosteric modulators ("NAMs"), which reduce, the actions of neurotransmitters at their primary receptor sites. Neuromodulators have no intrinsic activity of their own. We have coined the terms "ampakines" and "GABAkines" to refer to drugs that act as PAMs at the AMPA and $GABA_A$ receptors, respectively. By enhancing the effects of neurotransmitters without altering the normal pattern of neuronal activity, neuromodulators offer the possibility of developing "kinder and gentler" neuropharmacological drugs effective in certain neurological and neuropsychiatric disorders, with greater pharmacological specificity and reduced side effects.

In order to capitalize upon a possible market opportunity with respect to neuromodulators, the Company is implementing an internal restructuring plan by forming EndeavourRx as a stand-alone business focused on the neuromodulator market. EndeavourRx will comprise our ampakine program and our GABAkine program.

AMPAkines

The Company is developing a class of proprietary compounds known as ampakines, which are PAMs of the AMPA glutamate receptor. Ampakines are small molecule compounds that enhance the excitatory actions of glutamate at the AMPA receptor complex, which mediates most excitatory transmission in the central nervous system ("CNS"). Through an extensive translational research effort from the cellular level through Phase 2 clinical trials, we have developed a family of ampakines, including CX717, CX1739 and CX1942 that may have clinical application in the treatment of CNS-driven neurobehavioral and cognitive disorders, SCI, neurological diseases, and certain orphan indications. CX717 and CX1739, our lead clinical compounds, have successfully completed multiple Phase 1 safety trials with no drug-associated serious adverse events. Both compounds have also completed Phase 2 efficacy trials demonstrating target engagement, by antagonizing the process of opioid-induced respiratory depression ("OIRD"). CX717 has successfully completed a Phase 2 trial demonstrating the ability to significantly reduce the symptoms of adult ADHD. In an early Phase 2 study, CX1739 improved breathing in patients with central sleep apnea. Preclinical studies have highlighted the potential ability of these ampakines to improve motor function in animals with SCI. Subject to raising sufficient financing (of which no assurance can be provided), we believe that we will be able to initiate a human Phase 2 study with CX1739 or CX717 in patients with SCI and a human Phase 2B study in patients with ADHD using either CX1739 or CX717.

AMPAkines as Treatment for ADHD

ADHD is one of the most common neurobehavioral disorders. Currently available treatments for ADHD include amphetamine-type stimulants and non-stimulant agents targeting monoaminergic neurotransmitter systems in the brain. However, these neurotransmitter systems are not restricted to the brain and are widely found throughout the body. Thus, while these agents can be effective in ameliorating ADHD symptoms, they also can produce adverse cardiovascular effects, such as increased heart rate and blood pressure. Existing treatments also affect eating habits and can reduce weight gain and growth in children and have been associated with suicidal ideation in adolescents and adults. In addition, approved stimulant treatments are DEA classified as controlled substances and present logistical issues for distribution and protection from diversion. Approved non-stimulant treatments, such as atomoxetine (Strattera® and its generic equivalents), can take four to eight weeks to become effective and undesirable side effects also have been observed.

Various investigators have generated data supporting the concept that alterations in AMPA receptor function might underlie the production of some of the symptoms of ADHD. In rodent and primate models of cognition, ampakines have been demonstrated to reduce inattention and impulsivity, two of the cardinal symptoms of ADHD. Furthermore, ampakines do not stimulate spontaneous locomotor activity in either mice or rats, unlike the stimulants presently used for the treatment of ADHD, nor do they increase the stimulation produced by amphetamine or cocaine. These preclinical considerations prompted us to conduct a randomized, double-blind, placebo controlled, two period crossover study to assess the efficacy and safety of CX717 in adults with ADHD.

In a repeated measures analysis, a statistically significant treatment effect on ADHD Rating Scale (ADHD-RS), the primary outcome measure, was observed after a three-week administration of CX717, 800 mg BID. Differences between this dose of CX717 and placebo were observed as early as week one of treatment and continued throughout the remainder of the study. The low dose of CX717, 200 mg BID, did not differ from placebo. In general, results from both the ADHD-RS hyperactivity and inattentiveness subscales, which were secondary efficacy variables, paralleled the results of the total score. CX717 was considered safe and well tolerated.

Based on these clinical results, ampakines such as CX717 or CX1739 might represent a breakthrough opportunity to develop a non-stimulating therapeutic for ADHD with the rapidity of onset normally seen with stimulants. Subject to raising sufficient financing (of which no assurance can be provided), we are planning to continue this program with a Phase 2 clinical trial in patients with adult ADHD using one of our two lead ampakine compounds.

AMPAkines as Treatment for SCI

Ampakines also may have potential utility in the treatment and management of SCI to enhance motor functions and improve the quality of life for SCI patients. An estimated 17,000 new cases of SCI occur each year in the United States, most a result of automobile accidents. Currently, there are roughly 282,000 people living with spinal cord injuries, which often produce impaired motor function.

SCI can profoundly impair neural plasticity leading to significant morbidity and mortality in human accident victims. Plasticity is a fundamental property of the nervous system that enables continuous alteration of neural pathways and synapses in response to experience or injury. A large body of literature exists regarding the ability of ampakines to stimulate neural plasticity, possibly due to an enhanced synthesis and secretion of various growth factors.

Recently, studies of acute intermittent hypoxia ("AIH"), exposure to short periods of low oxygen, in patients with SCI demonstrate that neural plasticity can be induced to improve motor function. This is based on the ability of spinal circuitry to learn how to adjust spinal and brainstem synaptic strength following repeated hypoxic bouts. Because AIH induces spinal plasticity, the potential exists to harness repetitive AIH as a means of inducing functional recovery of motor function following SCI.

The Company has been working with Dr. David Fuller at the University of Florida with funding from NIH, to evaluate the use of ampakines for the treatment of compromised motor function in SCI. Using mice that have received spinal hemi-sections, CX717 was observed to increase motor nerve activity bilaterally. The effect on the hemisected side was greater than that measured on the intact side, with the recovery approximating that seen on the intact side prior to administration of ampakine. The doses of ampakines active in SCI were comparable to those demonstrating antagonism of OIRD, indicating target engagement of the AMPA receptors.

These animal models of motor nerve function following SCI support proof of concept for a new treatment paradigm using ampakines to improve motor functions in patients with SCI. With additional funding granted by NIH to Dr. Fuller, the Company is continuing its collaborative preclinical research with him while it is planning a clinical trial program focused on developing ampakines for the restoration of certain motor functions in patients with SCI. The Company is working with researchers at highly regarded clinical sites to finalize a Phase 2 clinical trial protocol. We believe that a clinical study could be initiated within several months of raising sufficient financing (of which no assurance can be provided).

GABAkines

The GABAkine program was recently established pursuant to the UWMRF Patent License Agreement. At present, the program is focused on developing certain GABAkines with certain $GABA_A$ receptor subtype selectivity. We believe that there is a considerable degree of receptor subtype heterogeneity, making subtype selectivity of our compounds a desirable attribute.

Benzodiazepines ("BDZs"), such as Valium® (diazepam), Librium® (chlordiazepoxide) and Xanax® (alprazolam) were the first major class of drugs reported to act as $GABA_A$ PAMs, by binding at a site distinct from the binding site for GABA. These drugs produced a wide range of pharmacological properties, including anxiety reduction, sedation, hypnosis, anti-convulsant, muscle relaxation, respiratory depression, cognitive impairment, as well as tolerance, abuse and withdrawal. For this reason, it was not surprising that BDZs were observed to act as $GABA_A$ PAMs indiscriminately across all $GABA_A$ receptor subtypes. Following the identification of BDZ binding sites on $GABA_A$ receptors, Dr. Lippa described CL218,872, the first non-BDZ to demonstrate that these receptors were heterogeneous by binding selectively to a subtype of $GABA_A$ receptor. This demonstration of receptor heterogeneity led to the hypothesis that the various pharmacological actions of the BDZs might be separable depending on the receptor subtype involved. In animal testing, CL218,872 provided the proof of principle that such a separation could be achieved by displaying anti-anxiety and anti-convulsant properties in the absence of sedation, amnesia and muscular incoordination. These findings gave impetus to the search for novel therapeutic drugs for neurological and psychiatric illnesses that display improvements in efficacy and reductions in side effects.

Over the last several years, a group of scientists led by Dr. James Cook of the University of Wisconsin and Dr. Jeffrey Witkin affiliated with the Indiana University School of Medicine, who are advising us, have synthesized and tested a broad series of novel drugs that display $GABA_A$ receptor subtype selectivity and pharmacological specificity.

Certain of these chemical compounds are the subject of the UWMRF Patent License Agreement. Of these compounds, we have identified KRM-II-81 as a clinical lead. KRM-II-81 is the most advanced and druggable of a series of compounds that display certain receptor subtype selective and pharmacological specificity. In studies using cell cultures, brain tissues and whole animals, KRM-II-81 acts as a $GABA_A$ PAM at selective $GABA_A$ receptor subtypes that we feel are intimately involved in neuronal processes underlying epilepsy, pain, anxiety and certain other indications. KRM-II-81 has demonstrated highly desirable properties in animal models of these and other potential therapeutic indications, in the absence of or with greatly reduced liability to produce sedation, motor incoordination, cognitive impairments, respiratory depression, tolerance, abuse and withdrawal seizures, all side effects associated with BDZs. We currently are focused on the potential treatment of epilepsy and pain.

Epilepsy and Existing Treatments

Epilepsy is a chronic and highly prevalent neurological disorder that affects millions of people world-wide and has serious consequences for the life of the affected individual. A first-line approach to the control of epilepsy is through the administration of anticonvulsant drugs. Repeated, uncontrolled seizures and the side effects arising from seizure medications have a negative effect on the developing brain and can lead to brain cell loss and severe impairment of neurocognitive function. The continued occurrence of seizure activity also increases the probability of subsequent epileptic events through sensitization mechanisms called seizure kindling. Seizures that are unresponsive to anti-epileptic treatments are life-disrupting and life-threatening with broad health, life, and economic consequences.

Like many diseases, epilepsy is still remarkably underserved by currently available medicines. Pharmaco-resistance to anticonvulsant therapy continues to be one of the key obstacles to the treatment of epilepsy. Although many anticonvulsant drugs are approved to decrease seizure probability, seizures frequently are not fully controlled and patients are generally maintained daily on multiple antiepileptic drugs with the hope of enhancing the probability of seizure control. Despite this polypharmacy approach, as many as 60% to 70% of patients continue to have seizures. As a result of the lack of seizure control, pharmaco-resistant epilepsy patients, including young children, sometimes require and elect to have invasive therapeutic procedures such as surgical resection.

Despite the availability of a host of marketed drugs of different mechanistic classes, the lack of seizure control in patients is the primary factor driving the need for improved antiepileptic drugs emphasized by researchers and patient advocacy communities. Increasing inhibitory tone in the CNS through enhancement of GABAergic inhibition is a proven mechanism for seizure control. However, GABAergic medications also exhibit liabilities that limit their antiepileptic potential. Tolerance develops to GABAergic drugs such as BDZs, limiting their use in a chronic setting. These drugs can produce cognitive impairment, somnolence, sedation, tolerance and withdrawal seizures that create dosing limitations such that they are generally used only for acute convulsive episodes.

GABAkines as Treatments for Epilepsy

KRM-II-81 has demonstrated efficacy in multiple rodent models and measures of antiepileptic drug efficacy *in vivo*. This includes nine acute seizure provocation models in mice and rats, four seizure sensitization models in rats and mice, two models of chronic epilepsy, and three models specifically testing pharmaco-resistant antiepileptic drug efficacy. Because it appears to have a greatly reduced side effect liability, it might be possible to use higher, more effective doses that standard of care medications. Predictions of superior efficacy of KRM-II-81 over standard of care anti-epileptics comes from the efficacy of this compound across a broad range of animal models of epilepsy. Importantly, KRM-II-81 has been shown to be effective in models assessing pharmaco-resistant epilepsy. Under these conditions, KRM-II-81 is efficacious in cases where standard of care medicines do not work.

In the absence of seizure control by anti-epileptics, surgical resection of affected brain tissue is one potential alternative to help with the control of seizures. In the process of this surgery, epileptic brain tissue can become available for research into epileptic mechanisms and the identification of novel antiepileptic drugs. The anticonvulsant action of KRM-II-81 was confirmed by microelectrode recordings from slices obtained from freshly excised cortex from epileptic patients where KRM-II-81 suppressed epileptiform electrical activity. While preliminary, these translational data lend considerable support to the further development of KRM-II-81 for the treatment of epilepsy.

GABAkines as Treatments for Pain

It is impossible not to be aware of the crisis that the opioid epidemic has created in the treatment of chronic pain. While there is no question as to their efficacy, the clinical use of opioids is severely limited due to the rapid development of tolerance and the production of OIRD, the major cause of opioid-induced lethality. Research programs are underway nationwide to discover and develop new non-opioid drugs that are effective analgesics without the tolerance and abuse liability ascribed to opioids. Chronic pain is especially difficult to treat due to its complex nature with a variety of different etiologies. For example, chronic pain may be produced by injury, surgery, neuropathy, the inflammation produced by arthritis or by certain drugs such as cancer chemotherapeutics. For these reasons, better management and control of chronic pain continues to be a serious need in medical practice.

Data from both preclinical and clinical studies are consistent with the idea that GABAergic neurotransmission is an important regulatory mechanism for the control of pain. gabapentin (Neurontin®) and pregabalin (Lyrica®) two commonly used drugs for the treatment of chronic pain are believed to produce their analgesic effects by enhancing GABAergic neurotransmission. However, although they have received FDA approval, the clinical results have not been overwhelming. In a published review of 37 clinical trials with a total of 5,914 patients experiencing neuropathic pain there was no difference in the percentage of patients experiencing pain reduction of greater than 50% when comparing gabapentin to placebo. The most common side effects produced by gabapentin were sedation, dizziness and problems walking. It is uncertain whether greater efficacy was not observed because of poor intrinsic pharmacological efficacy or insufficient dosages due to dose limiting side effects.

An alternate approach to enhancing GABAergic neurotransmission is the use of $GABA_A$ PAMs. This approach has been under-utilized because of the general lack of efficacy of the BDZ PAMs. However, a strong case for the potential value of subtype selective $GABA_A$ PAMs for the treatment of pain can be made. First, $GABA_A$ receptor regulated pathways are integral to pain processing with $\alpha 2/3$ containing $GABA_A$ receptor subtypes present on nerve pathways modulating pain sensation and perception. Second, we believe that the analgesic properties of BDZs may be masked by concurrent activation of other receptor subtypes that mediate the side effects. Diazepam has been reported to produce maximal analgesia if the side effects are attenuated by $GABA_A$ subtype genetic manipulation. Third, predecessor GABAkines, made by Dr. Cook, that selectively amplify $GABA_A$ receptor subtype signaling are effective in pain models in rodents at doses lower than those producing motor side effects.

In a number of laboratory procedures and animal studies, KRM-II-81 has been shown to selectively bind to $GABA_A$ receptor subtypes and enhance GABAergic neurotransmission. Sub-chronic dosing for 22 days with KRM-II-81 and the structural analogue, MP-III-80, demonstrated enduring analgesic efficacy without tolerance development. In contrast, tolerance developed to the analgesic effects of gabapentin. At a dose that produces maximal analgesic effect in an inflammatory chronic pain model, KRM-II-81 does not substitute for the BDZ midazolam in a drug discrimination assay, suggesting a reduced abuse liability. Furthermore, KRM-II-81 did not produce the respiratory depression observed with alprazolam, a major problem with BDZs leading to emergency room visits and overdose.

We believe that the ability to attenuate both acute and chronic pain combined with a greatly reduced side effect profile, a lack of tolerance and a reduced abuse potential makes KRM-II-81 a promising clinical lead and a potential advance in pain therapeutics. Results from preliminary chemistry, metabolism and pharmacokinetic studies support its further development.

Corporate and Product Development Plans

As discussed above, in order to facilitate our business activities and product development, we have organized our drug platforms into two separate business units. ResolutionRx is focused on pharmaceutical cannabinoids and EndeavourRx is focused on neuromodulators. Below is a description of the Company's product development plans within these business units.

ResolutionRx – Dronabinol program

For the dronabinol program within our ResolutionRx cannabinoid platform, the Company plans to manufacture, on a pilot scale, one or more new proprietary formulations of dronabinol with the enhanced properties described in our patent applications, for which we plan to spend approximately $150,000 to bench test *in vitro* several versions of dronabinol formulations in order to determine those with the best physico-chemical properties. To finance these efforts, the Company intends to use the estimated net proceeds from exercise of its put right, if available, under the White Lion EPA.

Assuming additional financing is obtained in addition to the net proceeds from the Company's exercise of its put right under the White Lion EPA, the Company intends to spend approximately $450,000 to $600,000 of these funds on the continued development of a proprietary formulation of dronabinol. This development would include (i) improvements to the Company's intellectual property position, (ii) improvements to our dronabinol formulation's PK profile, (iii) improvements to regulatory compliance, and (iv) expenditures for the initial stocking of clinical supply, packaging and distribution in anticipation of a Phase 2 PK/PD (pharmacodynamic) clinical trial and a pivotal Phase 3 clinical study. The performance of the Phase 2 PK/PD clinical trial and Phase 3 clinical study, however, would need yet additional funds either from separate financings or a collaboration with a strategic partner.

The Purisys Agreement and the 2014 License Agreement will need to be transferred or otherwise made available to ResolutionRx. See "*—Noramco Inc./Purisys, LLC - Dronabinol Development and Supply Agreement*" and "*—University of Illinois 2014 Exclusive License Agreement*" in Note 8. Commitments and Contingencies in the notes to condensed consolidated financial statements as of September 30, 2020 for more information on these agreements . While this subsidiary's initial, primary focus will be on re-purposing dronabinol for the treatment of OSA, we believe that our broad enabling patents and a new proprietary formulation may provide a framework for expanding into the larger burgeoning pharmaceutical cannabinoid industry. We believe that by creating this subsidiary, it may be possible, through separate finance channels and potential strategic transactions, to optimize the asset value not only of the cannabinoid platform, but our neuromodulation platform as well.

EndeavourRx – AMPAkines program

For the AMPAkines program within our EndeavourRx neuromodulators platform, the Company plans to initiate clinical testing of our AMPAkines in the treatment of SCI. To this end, approximately $145,000 would be utilized to assess the purity of our existing drug supplies and finalize a clinical trial protocol for a Phase 2A clinical trial to determine the safety and PK properties of one of our lead AMPAkines in patients who have had SCI. These tasks are critical for applying to the FDA for permission to amend our existing IND or initiate a new IND enabling the commencement of clinical trials. To finance these efforts, the Company intends to use the net proceeds to it from exercise of its put right under the White Lion EPA.

Assuming financing is obtained in addition to the net proceeds from the Company's exercise of its put right under the White Lion EPA, the Company would continue to focus on SCI, as we believe it would be the most efficient expenditure of our resources and yield an actionable result in the shortest period of time. Expenditures would include: (i) an estimated spend of $200,000 for chemistry, manufacturing and controls ("CMC") efforts, depending on the assessment of our drug supplies, (ii) an estimated spend of $400,000 on an initial Phase 2A single ascending dose safety and PK and pharmacodynamic ("PD") study in human SCI patients, (iii) an estimated spend of $600,000 on a Phase 2A multiple ascending dose safety and PK and PD study in SCI patients, and (iv) an estimated spend of $650,000 on a Phase 2B efficacy study in SCI patients. Our anticipated spend for ADHD would be approximately $100,000 with the larger spends occurring later dependent upon availability of financing.

EndeavourRx – GABAkines program

Assuming sufficient financing is obtained in addition to the net proceeds from the Company's exercise of its put right under the White Lion EPA, the Company plans to finance efforts with respect to the GABAkines program within our EndeavourRx neuromodulators platform. These efforts would be in preparation of an IND to be submitted to the FDA to commence human studies of KRM-II-81, our lead GABAkine drug candidate, for treatment-resistant epilepsy, and expenditures would include (i) an estimated spend of $530,000 for CMC efforts, (ii) an estimated spend of $450,000 for pre-clinical pharmacology, safety and absorption, distribution, metabolism, excretion ("ADME") studies, (iii) an estimated spend of $225,000 for animal safety studies and (iv) an estimated spend of $65,000 for regulatory consultants.

In connection with the organization and development of the ResolutionRx and EndeavourRx business units, we are planning certain corporate and development actions as summarized below. All of the below are subject to raising additional financing and/or entering into strategic relationships, of which no assurance can be given.

Proposed Creation of Subsidiaries

Pending approval by the Board of Directors, management intends to organize our ResolutionRx and EndeavourRx business units into two subsidiaries: (i) a ResolutionRx subsidiary, into which we intend to contribute our pharmaceutical cannabinoid platform and its related tangible and intangible assets and certain of its liabilities and (ii) an EndeavourRx subsidiary, into which we plan to contribute our neuromodulator platform, including both the AMPAkine and GABAkine programs and their related tangible and intangible assets and certain of their liabilities.

Management believes that there are several advantages to separating these platforms formally into newly formed subsidiaries, including but not limited to optimizing their asset values through separate finance channels and making them more attractive for capital raising as well as for strategic deal making.

Employee/Consultant Infrastructure Build-out

It is anticipated that the Company will use, at least initially, its management personnel to provide management, operational and oversight services to these two business units.

In order to broaden our operational expertise, we are planning to hire a number of highly qualified individuals, either as employees or consultants and, in tandem, increase our administrative support function.

Our relationship with Drs. Cook and Witkin has been highly cooperative to date. Our intent is to contractually formalize these relationships as consultants to the Company.

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 September 30, 2020.

UWMRF Patent License Agreement

See Notes 1, 2, 8 and 9 to our condensed consolidated financial statements at September 30, 2020.

Going Concern

The Company's 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 audit report on the Company's consolidated financial statements for the year ended December 31, 2019, expressed substantial doubt about the Company's ability to continue as a going concern. See Note 2. Business – *Going Concern* to our condensed consolidated financial statements at September 30, 2020.

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 September 30, 2020.

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 September 30, 2020.

See Note 8. Commitments and Contingencies – Significant Agreements and Contracts - *University of Illinois 2014 Exclusive License Agreement* to the Company's condensed consolidated financial statements at September 30, 2020.

See Note 8. Commitments and Contingencies – Significant Agreements and Contracts - *UWMRF Patent License Agreement* to the Company's condensed consolidated financial statements at September 30, 2020.

Critical Accounting Policies and Estimates

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

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
- Warrant Exercises

See Critical Accounting Policies and Estimates in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019 for a complete description.

Results of Operations

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2020	**2019**	**2020**	**2019**
Operating expenses:				
General and administrative, including $492,900 and $121,600 to related parties for the three months ended September 30, 2020 and 2019, respectively, and $725,780 and $364,825 to related parties for the nine months ended September 30, 2020 and 2019, respectively	$ 1,140,204	$ 279,930	$ 1,969,223	$ 874,834
Research and development, including 144,900 and $122,400 to related parties for the three months ended September 30, 2020 and 2019, respectively, and $389,700 and $367,200 to related parties for the nine months ended September 30, 2020 and 2019, respectively	171,776	150,527	480,242	447,877
Total operating expenses	1,311,980	430,457	2,449,465	1,322,711
Loss from operations	(1,311,980)	(430,457)	(2,449,465)	(1,322,711)
Loss on extinguishment of debt and other liabilities in exchange for equity	(65,906)	-	(389,902)	-
Interest expense, including $2,848 and $2,589 to related parties for the three months ended September 30, 2020 and 2019, respectively, and $8,481 and $7,683 to related parties for the nine months ended September 30, 2020 and 2019, respectively	(78,678)	(70,168)	(409,994)	(221,813)
Foreign currency transaction gain (loss)	(22,791)	30,781	7,151	57,135
Net loss attributable to common stockholders	$ (1,479,355)	$ (469,844)	$ (3,242,210)	$ (1,487,389)
Net loss per common share - basic and diluted	$ (0.01)	$ 0.12)	$ (0.02)	$ (0.38)
Weighted average common shares outstanding - basic and diluted	224,352,033	3,874,465	131,793,037	3,873,097

Three months Ended September 30, 2020 and 2019

Revenues. The Company had no revenues during the three months ended September 30, 2020 and 2019.

General and Administrative. For the three months ended September 30, 2020, general and administrative expenses were $1,140,204, an increase of $860,274, as compared to $279,930 for the three months ended September 30, 2019. The increase in general and administrative expenses for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019, is primarily due to an increase in corporate legal fees of $452,365 associated primarily with three convertible note financings, an equity purchase agreement, the preparation of a registration statement on Form S-1, our proxy statement on Schedule 14A and the special meeting of stockholders and advance work with respect to a potential Regulation A offering, an increase of $315,000 of stock-based compensation as a result of option grants and an increase of $84,900 in compensation and related benefits with RespireRx's new Chief Executive Officer and President being in that role for a full quarter in the current period but not having been employed by the Company in the prior comparable three month period, and smaller increases and decreases in a number of other general and administrative expenses.

Stock-based compensation in general and administrative expenses was $315,000 for the three months ended September 30, 2020 whereas there was no stock-based compensation in general and administrative expenses for the three months ended September 2019.

Research and Development. For the three months ended September 30, 2020, research and development expenses were $171,776, an increase of $21,249, as compared to $150,526 for the three months ended September 30, 2019. The increase in research and development expenses for the three months ended September 30, 2020, as compared to the three months ended September 30, 2019, is primarily a result of an increase in research and development stock-based compensation of $22,500, offset by a decrease of $1,251 in research and development insurance related costs.

Stock-based compensation in research and development expenses was $22,500 for the three months ended September 30, 2020 whereas there was no stock-based compensation in research and development expenses for the three months ended September 2019.

Loss on Extinguishment of Liabilities. During the three months ended September 30, 2020, the Company incurred a $65,906 loss on the settlement of certain accounts payable to a single vendor with the settlement paid with Series H Preferred Stock that was converted into Common Stock and warrants on September 30, 2020. There was no loss on extinguishment of liabilities for the three months ended September 30, 2019.

Interest Expense. During the three months ended September 30, 2020, interest expense was $78,678 as compared to $70,168 for the three months ended September 30, 2019. The increase of $8,510 is primarily the result of interest and amortization of note discounts to interest expense with respect to four convertible notes in June and July 2020 that were included in the current year three month period but did not exist in the prior year comparable three month period, while one convertible note that existed in the prior period was paid in full and terminated July 2020.

Foreign Currency Transaction (Loss) Gain. Foreign currency transaction loss was $22,791 for the three months ended September 30, 2020, as compared to a foreign currency transaction gain of $30,781 for the three months ended September 30, 2019. 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 September 30, 2020, the Company incurred a net loss of $1,479,355 as compared to a net loss of $469,843 for the three months ended September 30, 2019.

Nine months Ended September 30, 2020 and 2019

Revenues. The Company had no revenues during the nine months ended September 30, 2020 and 2019.

General and Administrative. For the nine months ended September 30, 2020, general and administrative expenses were $1,969,223, an increase of $1,094,389, as compared to $874,834 for the nine months ended September 30, 2019. The increase in general and administrative expenses for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019, is primarily due to an increase in corporate legal fees of $606,692 associated primarily with three convertible note financings, an equity purchase agreement, the preparation of a registration statement on Form S-1, our proxy statement on Schedule 14A and special meeting of stockholders and advance work in respect of a potential Regulation A offering, an increase of $315,000 of stock-based compensation as a result of option grants and an increase of $134,425 in compensation and related benefits with RespireRx's new Chief Executive Officer and President being in that role for a approximately five of the nine months ended September 30, 2020 but not having been employed by the Company in the prior comparable nine month period, and smaller increases and decreases in a number of other general and administrative expenses.

Stock-based compensation in general and administrative expenses was $315,000 for the nine months ended September 30, 2020 whereas there was no stock-based compensation in general and administrative expenses for the nine months ended September 2019.

Research and Development. For the nine months ended September 30, 2020, research and development expenses were $480,241, an increase of $32,365, as compared to $447,876 for the nine months ended September 30, 2019. The increase in research and development expenses for the nine months ended September 30, 2020, as compared to the nine months ended September 30, 2019, is primarily a result of an increase in research and development stock-based compensation of $22,500 and smaller increases in licensing fees ($2,500 pursuant to the UWMRF Patent License Agreement), insurance and with one vendor.

Stock-based compensation in research and development expenses was $22,500 for the nine months ended September 30, 2020 whereas there was no stock-based compensation in research and development expenses for the three months ended September 2019.

Loss on Extinguishment of Debt and other Liabilities. During the nine months ended September 30, 2020, the Company incurred a $389,902 loss on the exchange of equity for debt with respect to exchange agreements in March 2020 and settlement of certain accounts payable to a single vendor with the settlement paid with Series H Preferred Stock that was converted into Common Stock and warrants on September 30, 2020. On March 21, 2020, the Company entered into exchange agreements with several note holders and exchanged an aggregate of $255,786 of principal and accrued interest for 17,052,424 shares of the Company's stock with an exchange price of $0.015 per share which was less than the closing price of $0.034 per share. There was no loss on extinguishment of debt or liabilities for the nine months ended September 30, 2019.

Interest Expense. During the nine months ended September 30, 2020, interest expense was $409,994 as compared to $221,813 for the nine months ended September 30, 2019. The increase of $188,181 is primarily the result of interest incurred with respect to new convertible notes issued in April, June and July 2020 that were included in the current nine month period but did not exist in the prior year comparable nine month period while several notes that were outstanding during the comparable prior year nine month period were paid in full during the current nine months ended September 30, 2020.

Foreign Currency Transaction (Loss) Gain. Foreign currency transaction gain was $7,151 for the nine months ended September 30, 2020, as compared to a foreign currency transaction gain of $57,135 for the nine months ended September 30, 2019. 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 nine months ended September 30, 2020, the Company incurred a net loss of $3,242,210 as compared to a net loss of $1,487,388 for the nine months ended September 30, 2019. Included in the net loss is a loss on extinguishment of convertible debt and the loss on the settlement of certain accounts payable.

Liquidity and Capital Resources – September 30, 2020

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 $3,242,210 and net losses from operations of $2,449,465 for the nine months ended September 30, 2020 and net losses of $2,115,033 for the fiscal year ended December 31, 2019, and negative operating cash flows of $350,724 for the nine months ended September 30, 2020 and $487,745 for the fiscal year ended December 31, 2019, had a stockholders' deficiency of $7,288,185 at September 30, 2020, 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, 2019, expressed substantial doubt about the Company's ability to continue as a going concern.

At September 30, 2020, the Company had a working capital deficit of $7,288,185, as compared to a working capital deficit of $7,444,819 at December 31, 2019 reflecting an decrease in the working capital deficit of $156,634 for the nine months ended September 30, 2020. The decrease in the working capital deficit is due to an decrease in current liabilities resulting from executive officer compensation and benefit forgiveness in exchange for equity and settlements of two vendor accounts payable with equity and a decrease in cash of $16,474 offset by an increase in prepaid expenses of $27,386.

At September 30, 2020, the Company had cash aggregating $216 as compared to $16,690 at December 31, 2019, reflecting a decrease in cash of $16,474 for the nine months ended September 30, 2020.

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

The Company is continuing its efforts to raise additional capital in order to be able to pay its liabilities and fund its business activities on a going forward basis and regularly evaluates various measures to satisfy the Company's liquidity needs, including development and other agreements with collaborative partners and seeking to exchange or restructure some of the Company's outstanding securities. The Company is evaluating certain changes to its operations and structure to facilitate raising capital from sources that may be interested in financing only discrete aspects of the Company's development programs. Such changes could include a significant reorganization. Though the Company actively pursues opportunities to finance its operations through external sources of debt and equity financing, it has limited access to such financing and there can be no assurance that such financing will be available on terms acceptable to the Company, or at all.

Operating Activities. For the nine months ended September 30, 2020, operating activities utilized cash of $350,074, as compared to utilizing cash of $313,691 for the nine months ended September 30, 2019, to support the Company's ongoing general and administrative expenses as well as its research and development activities.

Financing Activities. For the nine months ended September 30, 2020, financing activities consisted of $66,250 in advances from an executive officer, net proceeds of $50,000 after payment of $3,000 of capitalized note costs from the April 2020 Note financing and net proceeds of $40,000 after payment of $3,000 of capitalized note costs from the June 2020 Note financing, net proceeds of $121,000 from the FirstFire Convertible Note financing in July 2020 and net proceeds of $63,750 from the EMA Convertible Note financing in July 2020. For the nine months ended September 30, 2019, financing activities consisted of the borrowings on convertible notes with warrants of $353,500 and the financing with a short term note of $71,068 in connection with the new directors and officers insurance policy as well as other insurance policies.

Principal Commitments

Employment Agreements

See Note 8. Commitments and Contingencies – Significant Agreements and Contracts – *Employment Agreements* to our condensed consolidated financial statements at September 30, 2020.

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 September 30, 2019.

UWM Research Foundation Patent License Agreement

See Note 8. Commitments and Contingencies – Significant Agreements and Contracts - *UWMRF Patent License Agreement* to our condensed consolidated financial statement at September 30, 2020.

A table setting forth the Company's principal cash obligations and commitments for the next five fiscal years as of September 30, 2020, aggregating $3,230,470, is set forth in Note 8. Commitments and Contingencies – *Summary of Principal Cash Obligations and Commitments*

Off-Balance Sheet Arrangements

At September 30, 2020, the Company did not have any transactions, obligations or relationships that could be considered off-balance sheet arrangements.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK

Not applicable.

ITEM 4. CONTROLS AND PROCEDURES

(a) Evaluation of Disclosure Controls and Procedures

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

The Company carried out an evaluation, under the supervision and with the participation of its management, consisting of its principal executive officer and principal financial officer, of the effectiveness of the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act). Based upon that evaluation, the Company's principal executive officer and principal financial officer concluded that, as of the end of the period covered in this report, the Company's disclosure controls and procedures were not effective to ensure that information required to be disclosed in reports filed under the Exchange Act is recorded, processed, summarized and reported within the required time periods and is accumulated and communicated to the Company's management, consisting of the Company's principal executive officer and principal financial officer, to allow timely decisions regarding required disclosure.

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. The Company is current in its SEC periodic reporting obligations, but as of the date of the filing of this report, the Company had not yet completed the process to establish 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 statements included in this report fairly present, in all material respects, the Company's financial condition, results of operations and cash flows for the periods presented.

Our management, consisting of our Chief Executive Officer and our Chief Financial Officer, has evaluated our internal control over financial reporting as of September 30, 2020 based on the 2013 Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations ("COSO") of the Treadway Commission. Based on this assessment, and taking into account the operating structure of the Company as it has existed from October 2012 through September 30, 2020, as well as the various factors discussed herein, our management has concluded that material weaknesses in the Company's internal control over financial reporting existed as of September 30, 2020, as a result of which our internal control over financial reporting was not effective at September 30, 2020.

Within the constraints of the Company's limited financial resources and as of the date of the filing of this report, the Company has not yet completed this process of reestablishing adequate internal controls over financial reporting.

(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 September 30, 2020 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 2019 10-K except as disclosed below. The Risk Factors set forth in the 2019 Form 10-K and in this report should be read carefully in connection with evaluating the Company's business and in connection with the forward-looking statements contained in this report. Any of the risks described in the 2019 Form 10-K or this report 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.

Risks Related to the COVID-19 pandemic

The novel coronavirus (COVID-19) pandemic may negatively impact our ability to successfully develop and commercialize our product candidates and technologies and may ultimately affect our business, financial condition and results of operations.

In March 2020, the World Health Organization declared COVID-19 a global pandemic, and governmental authorities around the world have implemented measures to reduce the spread of COVID-19. These measures have adversely affected workforces, customers, supply chains, consumer sentiment, economies, and financial markets, and, along with decreased consumer spending, have led to an economic downturn across many global economies. The COVID-19 pandemic rapidly escalated in the United States and continues to evolve, creating significant uncertainty and economic disruption, and leading to record levels of unemployment nationally. Numerous state and local jurisdictions had imposed, and those and others in the future may impose, shelter-in-place orders, quarantines, shut-downs of non-essential businesses, and similar government orders and restrictions on their residents to control the spread of COVID-19.

The COVID-19 pandemic and government responses thereto have made it very difficult to recruit clinical trial subjects and patients and to conduct clinical trials in general. We expect the life sciences industry and clinical trial activity to continue to face challenges arising from quarantines, site closures, travel limitations, interruptions to the supply chain for investigational products and other considerations if site personnel or trial subjects become infected with or are significantly at risk of contracting COVID-19. These challenges may lead to difficulties in meeting protocol-specified procedures. Further, in response to the public health emergency, the FDA issued guidance in March and July 2020 emphasizing that safety of trial participants is critically important. Decisions to continue or discontinue individual patients or the trial are expected to be made by trial sponsors in consultation with clinical investors and Institutional Review Boards, which may lead to the implementation of additional protocols such as COVID-19 screening procedures, resulting in potential delays and additional costs. The risks, strategic and operational challenges and costs of conducting such trials as a result of the global pandemic have exacerbated an already challenging clinical trial process, which may negatively impact our ability to plan or conduct trials if we secure sufficient financing to enable us to pursue such activity.

In addition, we expect to be impacted by the downturn in the U.S. economy, which could have an adverse impact on our ability to raise capital and our business operations.

The extent to which COVID-19 ultimately impacts our business, financial condition and results of operations will depend on future developments, which are highly uncertain and unpredictable, including new information which may emerge concerning the severity and duration of the COVID-19 pandemic and the effectiveness of actions taken to contain the COVID-19 pandemic or treat its impact, among others. Additionally, the extent to which COVID-19 ultimately impacts our operations will depend on a number of factors, many of which will be outside of our control. The COVID-19 pandemic is evolving and new information emerges regularly; accordingly, the ultimate consequences of the COVID-19 pandemic cannot be predicted with certainty. In addition to the disruptions adversely impacting our business and financial results, they may also have the effect of heightening many of the other risks described in these risk factors, including risks relating to our ability to begin to generate revenue, to generate positive cash flow, our relationships with third parties, and many other factors. We will attempt to minimize these impacts, but there can be no assurance that we will be successful in doing so.

Risks Related to Our Business and Our Need for Financing

Our independent registered public accounting firm has identified material weaknesses in our financial reporting process.

At December 31, 2019, our independent registered public accounting firm identified material weaknesses in our internal control over financial reporting. There can be no assurance that we will be able to successfully implement our plans to remediate the material weaknesses in our financial reporting process. Our failure to successfully implement our plans to remediate these material weaknesses could cause us to fail to meet our reporting obligations, to produce timely and reliable financial information, and to effectively prevent fraud. Additionally, such failure, or other weaknesses that we may experience in our financial reporting process or other internal controls, could cause investors to lose confidence in our reported financial information, which could have a negative impact on our financial condition and stock price.

Common Stock reserve requirements may restrict our ability to raise capital and continue to operate our business

Common Stock reserve requirements may restrict our ability to raise capital and continue to operate our business. We have received temporary waivers, which will expire on November 25, 2020, of certain of the Common Stock reserve requirements associated with certain of our convertible notes and certain related warrants. These waivers are necessary to ensure that we do not default on such notes or the terms of such warrants while we are seeking to increase the number of authorized shares of our Common Stock. As of September 30, 2020 taking into account the waivers and the transactions effected on that date, the Company was required to reserve 251,011,042 shares of its authorized and unissued Common Stock with respect to such notes and warrants that were not subject to such waivers and after reserving for outstanding options and other outstanding warrants, and had 422,157,997 shares of authorized but unissued shares of Common Stock, including 87,036,986 authorized, unissued and unreserved shares of Common Stock available. If we breach the contractual reserve requirements we will be in default of such contractual obligations which may have material adverse consequences which may make it more difficult to raise additional necessary capital. As described in Note 9. Subsequent Events—*Special Meeting of Stockholders*, assuming it is approved by the stockholders, RespireRx intends to effect an increase in the number of authorized shares of Common Stock on November 24, 2020 or November 25, 2020. This increase would allow the Company to remain in compliance with contractual reserve requirements following the November 25, 2020 expiration of the waivers of such requirements.

Our product opportunities rely on licenses from research institutions and if we lose access to these technologies or applications, our business could be substantially impaired.

Through our acquisition of Pier, we gained access to a pre-existing relationship between Pier and the UIC. Effective in September 2014, the Company entered into the UIC License Agreement with the UIC, which gave the Company certain exclusive rights with respect to certain patents and patent applications in the United States and other countries claiming the use of dronabinol and other cannabinoids for the treatment of sleep-related breathing disorders, including sleep apnea. The UIC License Agreement obligates the Company to comply with various commercialization and reporting requirements and to make various royalty payments, including potential one-time and annual royalty payments, as well as payments upon the achievement of certain development milestones.

The Company and UWMRF executed the UWMRF Patent License Agreement effective August 1, 2020 pursuant to which RespireRx licensed the intellectual property identified therein, including with respect to GABAkines. In consideration for the licenses granted, the Company will pay to UWMRF patent filing and prosecution costs, annual license maintenance fees, one-time milestone payments, and annual royalties.

If we are unable to comply with the terms of these licenses, such as required payments thereunder, these licenses might be terminated.

We may not be able to successfully develop and commercialize our product candidates and technologies.

The development of our product candidates is subject to risks commonly experienced in the development of products based upon innovative technologies and the expense and difficulty of obtaining approvals from regulatory agencies. Drug discovery and development is time consuming, expensive and unpredictable. On average, only one out of many thousands of chemical compounds discovered by researchers proves to be both medically effective and safe enough to become an approved medicine.

Due to our reliance on third parties to conduct clinical trials on our behalf, we are unable to directly control the timing, conduct, expense and quality of our clinical trials, which could adversely affect our clinical data and results and related regulatory approvals. All of our product candidates are in the preclinical or early to mid-clinical stage of development and although we have previously completed certain Phase 2 trials, and although we are planning for additional preclinical and clinical trials, including potentially an advanced-clinical stage trial, we do not have any currently active trials. Accordingly, we will require significant additional funding for research, development and clinical testing of our product candidates, which may not be available on favorable terms or at all, before we are able to submit them to any of the regulatory agencies for clearances for commercial use.

Additionally, our success, at least in part, is dependent upon the strength of our intellectual property, including, but not limited to licensed and owned patents, patent applications, continuations-in-part, provisional patent applications, know-how, trade secrets and other forms of intellectual property. The issuance of patents with relevant claims is subject to varying degrees of uncertainty. Our ability to defend our intellectual property or challenge third party intellectual property infringement claims is expensive, time-consuming and uncertain. If our patent applications do not issue with relevant claims or if we cannot defend our patents, or, as appropriate, challenge interfering patents or actions of third parties, or otherwise maintain our intellectual property, our business and operations will be adversely affected.

The process from discovery to development to regulatory approval can take several years and drug candidates can fail at any stage of the process. Late stage clinical trials often fail to replicate results achieved in earlier studies. We cannot be certain that we will be able to successfully complete any of our research and development activities. One of our product candidates is based, at least in part, on the development of one or more new formulations and the repurposing of an approved drug, the development of which is inherently risky while others of our product candidates have never been approved for marketing by any regulatory bodies and are subject to substantial research and development risks. Concerns about the safety and efficacy of our product candidates could limit our future success.

Even if we do complete our research and development activities, we may not be able to successfully market any of the product candidates or be able to obtain the necessary regulatory approvals or assure that healthcare providers and payors will accept our product candidates. We also face the risk that any or all of our product candidates will not work as intended or that they will be unsafe, or that, even if they do work and are safe, that our product candidates will be uneconomical to manufacture and market on a large scale. Due to the extended testing and regulatory review process required before we can obtain marketing clearance, we do not expect to be able to commercialize any therapeutic drug for several years, either directly or through our corporate partners or licensees.

We may not be able to compete with other biopharmaceutical or pharmaceutical companies in research, development or the marketing our products.

The pharmaceutical industry is characterized by intensive research efforts, rapidly advancing technologies, intense competition and a strong emphasis on proprietary therapeutics. Our competitors include many companies, research institutes and universities that are working in a number of pharmaceutical or biotechnology disciplines to develop therapeutic products similar to those we are currently investigating. Most of these competitors have substantially greater financial, technical, manufacturing, marketing, distribution or other resources than we do. In addition, many of our competitors have experience in performing human clinical trials of new or improved therapeutic products and obtaining approvals from the FDA and other regulatory agencies. We have no experience in conducting and managing later-stage clinical testing or in preparing applications necessary to obtain regulatory approvals. We expect that competition in this field will continue to intensify.

Our patents and patent applications do not cover the entire world, thus limiting the potential exclusive commercialization of our products to those countries in which we have intellectual property protection. We are aware of at least one company that may be developing a product or product similar to one of our prospective products for our proposed indication in countries where we do not have intellectual property protection. Such company or companies may choose to compete with us in countries where we do have intellectual property protection and cause us to expend resources defending our intellectual property. A liberal regulatory environment or unenforced or poorly enforced regulations may encourage competition from non-drug products such as medical marijuana or dietary supplements and similar products containing cannabis-derived molecules making claims that would be competitive with our proposed regulatory-approved claims. Since our target markets are very large, there is a great deal of economic incentive for others to enter and compete in those markets. We must compete with other companies with respect to their research and development efforts and for capital and other forms of funding. An inability to compete would have a material adverse impact on our business operations.

We have announced a restructuring plan to facilitate the financing of our business initiatives. We may not achieve some or all of the expected benefits of our restructuring plan and the restructuring may adversely affect our business.

As further discussed in Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations—*Proposed Creation of Subsidiaries*, the Company is considering an internal restructuring plan that contemplates spinning out our two drug platforms under ResolutionRx and EndeavourRx into separate operating businesses or subsidiaries. The intent of this restructuring is to facilitate financing of the programs and platforms underlying ResolutionRx and EndeavourRx, and to better align our human resources with our clinical development strategy.

Implementation of a restructuring plan is costly and disruptive to our business, and we may encounter unexpected costs while implementing the restructuring plan. Even if implemented, we may not be successful in attracting the necessary sources of financing or recruiting the necessary human resources to achieve the intended results. As such, we may not be able to obtain the estimated benefits that are initially anticipated in connection with our restructuring in a timely manner or at all. We may need to undertake additional restructurings in the future. As a result of any restructuring, we may experience a loss of continuity, loss of accumulated knowledge and/or inefficiency during transitional periods and may lose momentum in the development of our product candidates. Additionally, reorganization and restructuring can require a significant amount of management and other employees' time and focus, which may divert attention from operating and growing our business. Any failure to properly execute the restructuring plans could result in total costs that are greater than expected and cause us not to achieve the expected long-term operational benefits, and might adversely affect our financial condition, operating results and future operations.

We have not voluntarily implemented various corporate governance measures, in the absence of which stockholders may have more limited protections against interested director transactions, conflicts of interests and similar matters.

We have not adopted any corporate governance measures, since our securities are not yet listed on a national securities exchange and we are not required to do so. We have not adopted corporate governance measures such as separate audit or other independent committees of our Board as we presently have only one independent director. If we expand our board membership in future periods to include additional independent directors, we may seek to establish an audit and other committees of our Board. It is possible that if our Board included additional independent directors and if we were to adopt some or all of these corporate governance measures, stockholders would benefit from somewhat greater assurances that internal corporate decisions were being made by disinterested directors and that policies had been implemented to define responsible conduct. For example, in the absence of audit, nominating and compensation committees comprised of at least a majority of independent directors, decisions concerning matters such as compensation packages to our senior officers and recommendations for director nominees may be made by a majority of directors who have an interest in the outcome of the matters being decided. You should bear in mind our current lack of corporate governance measures in formulating investment decisions.

Risks Related to the Trading and Ownership of our Common Stock and our Capital Structure

Our stock price is volatile and our Common Stock could decline in value.

Our Common Stock is currently quoted for public trading on the OTCQB Venture Market. The trading price of our Common Stock has been subject to wide fluctuations and may fluctuate in response to a number of factors, many of which will be beyond our control.

The market price of securities of life sciences companies in general has been very unpredictable. Broad market and industry factors may adversely affect the market price of our Common Stock, regardless of our operating performance. In the past, following periods of volatility in the market price of a company's securities, securities class-action litigation has often been instituted. Such litigation, if instituted, could result in substantial costs for us and a diversion of management's attention and resources.

The range of sales prices of our Common Stock for the period between January 1, 2020 and September 30, 2020 and the fiscal year ended December 31, 2019, as quoted on the OTCQB, was $0.0033 to $0.1499 and $0.0771 to $0.8500, respectively. The following factors, in addition to factors that affect the market generally, could significantly affect our business, and may cause volatility or a decline in the market price of our Common Stock:

- competitors announcing technological innovations or new commercial products;
- competitors' publicity regarding actual or potential products under development;
- regulatory developments in the United States and foreign countries;
- legal developments regarding cannabinoids and cannabis products in the United States and foreign countries;
- developments concerning proprietary rights, including patent litigation;
- public concern over the safety of therapeutic products;
- changes in healthcare reimbursement policies and healthcare regulations;
- future issuances and sales of our Common Stock, including pursuant to conversions of our outstanding convertible instruments and this offering;
- our Common Stock being delisted from the OTCQB; and
- failure to raise additional needed funds.

At times, our Common Stock is thinly traded and you may be unable to sell some or all of your shares at the price you would like, or at all, and sales of large blocks of shares may depress the price of our Common Stock.

Our Common Stock has historically been sporadically or "thinly" traded, meaning that the number of persons interested in purchasing shares of our Common Stock at prevailing prices at any given time may be relatively small or non-existent. Recently, our Common Stock has been more "broadly" traded, meaning that it has been trading in higher volumes; however, there can be no assurance that this attribute will continue. As a consequence, there may be periods of several days or more when trading activity in shares of our Common Stock is minimal or non-existent, as compared to a seasoned issuer that has a large and steady volume of trading activity that will generally support continuous sales without an adverse effect on share price. This could lead to wide fluctuations in our share price. You may be unable to sell our Common Stock at or above your purchase price, which may result in substantial losses to you. Also, as a consequence of this lack of liquidity, the trading of relatively small quantities of shares by our stockholders may disproportionately influence the price of shares of our Common Stock in either direction. The price of shares of our Common Stock could, for example, decline precipitously in the event a large number of shares of our Common Stock are sold on the market without commensurate demand, as compared to a seasoned issuer which could better absorb those sales with a lesser or no adverse impact on its share price.

A large percentage of the Company's shares are held by a few stockholders, some of whom are affiliated with members of the Company's management and our Board of Directors. As these principal stockholders substantially control the Company's corporate actions, our other stockholders may face difficulty in exerting any influence over matters not supported by these principal stockholders.

RespireRx's principal stockholders include (i) the Arnold Lippa Family Trust of 2007 (the "Lippa Trust"), (ii) the Jeff Eliot Margolis 2016 Trust, (iii) the Jeff Eliot Margolis Trust for the Benefit of Matthew Shane Margolis, (iv) Jeff Eliot Margolis Trust for the Benefit of Emily Alexa Margolis, (v) Dawn Gross Margolis 2016 Trust, (vi) Dawn Gross Margolis Trust for the Benefit of Matthew Shane Margolis, and (vii) Dawn Gross Margolis Trust for the Benefit of Emily Alexa Margolis (collectively, (ii), (iii), (iv), (v), (vi) and (vii) the "Margolis Trusts" and with the Lippa Trust, the "Trusts"). The trustee of the Margolis trusts is the spouse of Jeff E. Margolis. Mr. Margolis, the Company's Senior Vice President, Chief Financial Officer, Treasurer and Secretary, is affiliated with the Margolis Trusts and may be deemed to have an indirect beneficial ownership interest in the stock owned by the Trusts. Arnold S. Lippa is neither the trustee nor the beneficiary of the Lippa Trust. In addition, Timothy L. Jones, the Company's President and Chief Executive Officer and a director, owns 4,409,063 shares of Common Stock. As of September 30, 2020, these principal stockholders collectively owned 225,175,088 shares of Common Stock and warrants to purchase an additional 216,100,903 shares of Common Stock. These stockholders, acting individually or as a group, may be able to exert control or significant influence over matters such as electing directors, amending the Certificate of Incorporation or Bylaws, or approving mergers or other business combinations or transactions. In addition, because of the percentage of ownership and voting concentration in these principal stockholders, elections of the directors on the Board of Directors may be within the control of these stockholders. While all of RespireRx's stockholders are entitled to vote on matters submitted to them for approval, the concentration of shares and voting influence or control presently lies with these principal stockholders. As such, it would be difficult for stockholders to propose and have approved proposals not supported by these principal stockholders. There can be no assurance that matters voted upon by the RespireRx's officers and directors in their capacity as stockholders will be viewed favorably by all stockholders of RespireRx. The stock ownership of RespireRx's principal stockholders may discourage a potential acquirer from seeking to acquire shares of Common Stock which, in turn, could reduce RespireRx's stock price or prevent its stockholders from realizing a premium over its stock price.

Our Certificate of Incorporation, Series H Preferred Stock and other governing documents may prevent or delay an attempt by our stockholders to replace or remove management.

Certain provisions of our Certificate of Incorporation could make it more difficult for a third party to acquire control of our business, even if such change in control would be beneficial to our stockholders. Our Certificate of Incorporation allows the Board of Directors to issue up to 5,000,000 shares of preferred stock, with characteristics to be determined by the Board of Directors, without stockholder approval. The ability of our Board of Directors to issue additional preferred stock may have the effect of delaying or preventing an attempt by our stockholders to replace or remove existing directors and management.

Historically, warrants to purchase Common Stock have been issued as compensation for professional services, typically related to fund raising or in connection with the issuance of promissory notes.

In addition, certain executive officers, members of the Board of Directors and certain vendors have offered to forgive accrued compensation and other amounts due to them, and the Board of Directors accepted such offers in exchange for either shares of Common Stock, options to purchase Common Stock, or preferred stock convertible into Common Stock. Specifically, in fiscal year 2020, three officers and directors exchanged the right to receive payment of accrued compensation in return for shares of Common Stock and for shares of Series H Preferred Stock, which entitles these officers to that number of votes equal to two times the number of Common Stock into which such holder's Series H Preferred Stock would be convertible. All such outstanding shares of Series H Preferred Stock have been fully converted into shares of Common Stock and warrants to purchase shares of Common Stock.

If executive officers offer and if the Board of Directors accepts such offers in the future, a significant number of shares of Common Stock or one or more options to purchase, or shares of preferred stock convertible into, a significant number of shares of Common Stock could be issued or granted. The ability of our Board of Directors to issue additional shares of Common Stock, options to purchase shares of Common Stock, warrants to purchase shares of Common Stock, or preferred stock convertible into Common Stock may have the effect of delaying or preventing an attempt by our stockholders to replace or remove existing directors and management.

Our Common Stock is deemed a "penny stock," which a broker-dealer may find more difficult to trade and an investor may find more difficult to acquire or dispose of in the secondary market.

Our Common Stock is subject to the so-called "penny stock" rules. The SEC has adopted regulations that define a "penny stock" to be any equity security that has a market price per share of less than $5.00, subject to certain exceptions, such as any securities listed on a national securities exchange. For any transaction involving a "penny stock," unless exempt, the rules impose additional sales practice requirements on broker-dealers, subject to certain exceptions. If our Common Stock remains a "penny stock," a broker-dealer may find it more difficult to trade our Common Stock and an investor may find it more difficult to acquire or dispose of our Common Stock on the secondary market. Recently, our Common Stock has been trading below a penny. Many broker-dealers do not accept for deposit shares of common stock that trade below a penny, and those that do accept such shares for deposit place limitations on the deposit or charge higher fees associated with the deposit, the transactions in the shares of common stock or with respect to the account in general. Taking these additional factors together, and investor may find it even more difficult to acquire or dispose of our Common Stock.

We may issue additional shares of our Common Stock, and investment in our company is likely to be subject to substantial dilution.

Stockholders' interests in the Company will be diluted and stockholders may suffer dilution in their net book value per share when we issue additional shares. Dilution is the difference between what investors pay for their stock and the net tangible book value per share immediately after the additional shares are purchased. We are authorized to issue up to 1,000,000,000 shares of Common Stock and our Board of Directors has authorized an increase to 2,000,000,000, subject to stockholder approval. Our financing activities in the past focused on convertible note financing that requires us to issue shares of Common Stock to satisfy principal, interest and any applicable penalties related to these convertible notes. When required under the terms and conditions of the convertible notes, we issue additional shares of Common Stock that have a dilutive effect on our stockholders. We anticipate that all or at least a substantial portion of our future funding, if any, will be in the form of equity financing from the sale of our Common Stock and so any investment in the Company will likely be diluted, with a resulting decline in the value of our Common Stock.

Additional financing may not be available on terms acceptable to us, and our ability to raise capital through equity financing may be limited by the number of authorized shares of our Common Stock. In order to raise significant additional amounts from equity financing, we will need to seek, and have sought, stockholder approval to amend our Certificate of Incorporation to increase the number of authorized shares of our Common Stock, and any such amendment would require the approval of the holders of a majority of the outstanding shares of our Common Stock. If we are unable to obtain needed financing on acceptable terms, we may not be able to implement our business plan, which could have a material adverse effect on our business, financial condition, results of operations and prospects.

Our Common Stock may be subject to removal from the OTC Markets OTCQB quotation service if our stock does not have a closing bid price of at least $0.01 per share for a period of 10 consecutive trading days on or before December 10, 2020, and our financing instrument with Power Up may impede a successful corporate action to address this issue.

Our Common Stock currently trades, and for a period in excess of 30 calendar days has traded, below $0.01 per share on the OTCQB Venture Market. To continue to meet the OTCQB Venture Market Standards for Continued Eligibility for OTCQB as per the OTCQB Standards, Section 2.3(2), our Common Stock must have a closing bid of $0.01 per share for more for 10 consecutive trading days. We have received an extension of time until December 10, 2020 to cure the deficiency.

To bring the Company's stock price back into compliance, the Company is seeking stockholder approval for a ten-to-one (10:1) reverse stock split as described in Note 9. Subsequent Events—Special Meeting of the Stockholders. However, the Financial Industry Regulatory Authority ("FINRA") will delay the announcement to the U.S. financial markets of the reverse stock split, if such corporate action is approved by the Company's stockholders, due to the Company's financing arrangements with Power Up Lending Group Ltd. ("Power Up"). See Note 4. Notes Payable for information on these financing arrangements. FINRA has decided to perform a secondary review of Power Up's connection to the Company, which will delay the date of FINRA's notification to the U.S. financial markets of the contemplated reverse stock split beyond the December 10, 2020 deadline set by the OTCQB Venture Market by which the Company has to cure the deficiency with respect to its share price. FINRA has notified the Company of the fact that one or more of Power Up's principals was involved with a former SEC cease and desist proceeding and a separate civil action brought by the Manhattan U.S. Attorney. Management intends to request a further extension from the OTCQB Venture Market, which cannot be guaranteed. The OTCQB Venture has informed the Company that the extension to December 10, 2020, which the Company had previously received, would be a final extension.

If we do not cure the deficiency, our Common Stock would no longer be eligible to trade on the OTCQB Venture Market. A downgrade to a lower OTC Pink market would likely have a material adverse impact on the trading of our Common Stock because fewer brokerage firms would be making markets in our Common Stock or eligible to transact business in our Common Stock. Stocks that trade on OTC Pink are often considered to be stocks of companies in financial distress, not current or less transparent in their financial reporting.

Furthermore, we may not issue shares for consideration of less than par value of $0.001, and should the share price of our Common Stock fall below par value, our ability to exercise put options to White Lion would be materially impacted, which could render the equity line unavailable to us and impact our operations.

Delaware law, our Certificate of Incorporation and our Bylaws provides for the indemnification of our officers and directors at our expense, and correspondingly limits their liability, which may result in a major cost to us and hurt the interests of our shareholders because corporate resources may be expended for the benefit of officers and/or directors.

Our Certificate of Incorporation and By-Laws of the Company, as amended (the "Bylaws") include provisions that eliminate the personal liability of our directors for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the Company or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the Delaware General Corporation Law, or (iv) for any transaction from which the director derived an improper personal benefit. These provisions eliminate the personal liability of our directors and our shareholders for monetary damages arising out of any violation of a director of his fiduciary duty of due care, but do not affect a director's liabilities under the federal securities laws or the recovery of damages by third parties.

We do not intend to pay cash dividends on any investment in the shares of stock of our Company and any gain on an investment in our Company will need to come through an increase in our stock's price, which may never happen.

We have never paid any cash dividends and currently do not intend to pay any cash dividends for the foreseeable future. To the extent that we require additional funding currently not provided for, our funding sources may prohibit the payment of a dividend. Because we do not currently intend to declare dividends, any gain on an investment in our Company will need to come through an increase in our Common Stock's price. This may never happen, and investors may lose all of their investment in our Company.

FINRA sales practice requirements may also limit a stockholder's ability to buy and sell our stock.

In addition to the "penny stock" rules described above, FINRA has adopted rules that require that in recommending an investment to a customer, a broker-dealer must have reasonable grounds for believing that the investment is suitable for that customer. Prior to recommending speculative low-priced securities to their non-institutional customers, broker-dealers must make reasonable efforts to obtain information about the customer's financial status, tax status, investment objectives and other information. Under interpretations of these rules, FINRA believes that there is a high probability that speculative low-priced securities will not be suitable for at least some customers. FINRA requirements make it more difficult for broker-dealers to recommend that their customers buy our Common Stock, which may limit your ability to buy and sell our stock and have an adverse effect on the market for our shares.

Costs and expenses of being a reporting company under the Exchange Act are substantial and prevent us from achieving profitability.

We are subject to the reporting requirements of the Exchange Act and aspects of the Sarbanes-Oxley Act. We expect that the requirements of these rules and regulations will continue to comprise a substantial portion of our legal, accounting and financial compliance costs, and to make some activities more difficult, time-consuming and costly, placing significant strain on our personnel, systems and resources.

If we fail to remain current on our reporting requirements, we could be removed from the OTCQB, which would limit the ability of broker-dealers to sell our Common Stock and the ability of stockholders to sell their Common Stock in the secondary market.

Companies trading on the OTCQB must be reporting issuers under Section 12 of the Exchange Act, and must be current in their filings under the Exchange Act to maintain price quotation privileges on the OTCQB. If we fail to remain current on our reporting requirements, we could be removed from the OTCQB and be forced to be traded on the OTC Pink Sheets, which requires a more challenging stock purchase process. As a result, the liquidity for our Common Stock could be adversely affected by limiting the ability of broker-dealers to sell our common stock and the ability of stockholders to sell their Common Stock in the secondary market. The OTCQB is recognized by the SEC as an established public market. The OTC Pink Sheets is the lowest and most speculative tier of the three marketplaces for the trading of over-the-counter stocks.

OTC Pink Sheets shares generally trade thinly and infrequently making it hard to buy or sell when the investor wants to complete a transaction. Accordingly, the market for our Common Stock would be significantly diminished if we were forced to trade on the OTC Pink Sheets market.

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

There were no unregistered sales of equity securities during the nine months ended September 30, 2020 that were not disclosed by the Company on a Current Report on Form 8-K. There were exchanges of convertible notes inclusive of accrued interest on July 1, 2020 and July 7, 2020 related to issuances of Common Stock, as well as forgiveness of accrued compensation and related issuances of the Company's Series H Preferred Stock on each of July 13, 2020 and September 30, 2020, which shares of Series H Preferred Stock were converted into Common Stock and warrants on September 30, 2020. Similarly, on September 30, 2020 there were two settlements of accounts payable by issuance of Series H Preferred Stock to two vendors. Such Series H Preferred Stock was converted into Common Stock and warrants on September 30, 2020. See Note 4. Notes Payable – *Convertible Notes Payable* of our condensed consolidated financial statements at September 30, 2020 and Part I, Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations – *Liquidity and Capital Resources – September 30, 2020.*

Additional information with respect to the transactions described above is provided in the Notes to the Condensed Consolidated Financial Statements for the nine months ended September, 2020.

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, an approximately 20% common stockholder of RespireRx at that time. SY Corporation was a significant stockholder and a related party at the time of the transaction but was not considered a significant stockholder or related party subsequent to December 31, 2015. 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. RespireRx believes that SY Corporation is in default of its obligations under its January 2012 license agreement, as amended, with RespireRx, but RespireRx has not yet issued a notice of default. RespireRx has in the past made several efforts towards a comprehensive resolution of the aforementioned matters involving SY Corporation. During the nine months ended September 30, 2020, there were no further communications between RespireRx and SY Corporation.

Note payable to SY Corporation consists of the following at September 30, 2020 and December 31, 2019:

	September 30, 2020	December 31, 2019
Principal amount of note payable	$ 399,774	$ 399,774
Accrued interest payable	399,293	363,280
Foreign currency transaction adjustment	(3,969)	3,182
	$ 795,098	$ 766,236

Interest expense with respect to this promissory note was $36,013 and $35,881 for nine months ended September 30, 2020 and 2019, respectively.

Default on Convertible Notes Payable

At September 30, 2020, the amount owed on the one remaining Original Convertible Note in default was $47,526, including principal and interest.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

Not applicable.

ITEM 6. EXHIBITS

INDEX TO EXHIBITS

The following documents are filed as part of this report:

Exhibit Number	Description of Document
3.1	Certificate of Designation, Preferences, Rights and Limitations of Series H 2% Voting, Non-Participating, Convertible Preferred Stock (incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K (file no. 001-16467) filed on July 13, 2020).
3.2	Amendment to Certificate of Designation, Preferences, Rights and Limitations of Series H 2% Voting, Non-Participating, Convertible Preferred Stock (incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K (file no. 001-16467) filed on October 5, 2020).
10.1	Securities Purchase Agreement, dated July 2, 2020, between RespireRx Pharmaceuticals Inc. and FirstFire Global Opportunities Fund, LLC (incorporated by reference to Exhibit 99.1 of the Company's Current Report on Form 8-K (file no. 001-16467) filed on July 7, 2020).
10.2	Convertible Promissory Note, dated July 2, 2020, in favor of FirstFire Global Opportunities Fund, LLC (incorporated by reference to Exhibit 99.2 of the Company's Current Report on Form 8-K (file no. 001-16467) filed on July 7, 2020).
10.3	Common Stock Purchase Warrant, dated July 2, 2020, in favor of FirstFire Global Opportunities Fund, LLC (incorporated by reference to Exhibit 99.3 of the Company's Current Report on Form 8-K (file no. 001-16467) filed on July 7, 2020).
10.4+	Exchange Agreement, dated July 13, 2020, between RespireRx Pharmaceuticals Inc. and Jeff Eliot Margolis (incorporated by reference to Exhibit 99.1 of the Company's Current Report on Form 8-K (file no. 001-16467) filed on July 13, 2020).
10.5+	Exchange Agreement, dated July 13, 2020, between RespireRx Pharmaceuticals Inc. and Arnold S. Lippa (incorporated by reference to Exhibit 99.1 of the Company's Current Report on Form 8-K (file no. 001-16467) filed on July 13, 2020).
10.6	Equity Purchase Agreement, dated July 28, 2020, between RespireRx Pharmaceuticals Inc. and White Lion Capital, LLC (incorporated by reference to Exhibit 99.1 of the Company's Current Report on Form 8-K (file no. 001-16467) filed on August 3, 2020).
10.7	Registration Rights Agreement, dated July 28, 2020, between RespireRx Pharmaceuticals Inc. and White Lion Capital, LLC (incorporated by reference to Exhibit 99.2 of the Company's Current Report on Form 8-K (file no. 001-16467) filed on August 3, 2020).
10.8	8% Fixed Promissory Note, dated July 28, 2020 in favor of White Lion Capital, LLC (incorporated by reference to Exhibit 99.3 of the Company's Current Report on Form 8-K (file no. 001-16467) filed on August 3, 2020).
10.9	Amendment No. 1 to 8% Fixed Promissory Note in favor of White Lion Capital, LLC, dated September 30, 2020 (incorporated by reference to Exhibit 99.6 of the Company's Current Report on Form 8-K (file no. 001-16467) filed on October 5, 2020).
10.10+	Amendment No. 1 to Employment Agreement of Timothy Jones, effective July 31, 2020 (incorporated by reference to Exhibit 99.5 of the Company's Current Report on Form 8-K (file no. 001-16467) filed on August 3, 2020).
10.11+	Fifth Amendment of Amended and Restated RespireRx Pharmaceuticals Inc. 2015 Stock and Stock Option Plan (incorporated by reference to Exhibit 99.14 of the Company's Current Report on Form 8-K (file no. 001-16467) filed on August 3, 2020).

10.12	Patent License Agreement, dated as of August 1, 2020, between RespireRx Pharmaceuticals Inc. and the University of Wisconsin-Milwaukee Research Foundation, Inc. (incorporated by reference to Exhibit 99.1 of the Company's Current Report on Form 8-K (file no. 001-16467) filed on August 4, 2020).
10.13	Securities Purchase Agreement, dated July 30, 2020, between RespireRx Pharmaceuticals Inc. and EMA Financial, LLC (incorporated by reference to Exhibit 99.4 of the Company's Current Report on Form 8-K (file no. 001-16467) filed on August 4, 2020).
10.14	10% Convertible Note, dated July 30, 2020, in favor of EMA Financial, LLC (incorporated by reference to Exhibit 99.5 of the Company's Current Report on Form 8-K (file no. 001-16467) filed on August 4, 2020).
10.15	Common Stock Purchase Warrant, dated July 30, 2020, in favor of EMA Financial, LLC (incorporated by reference to Exhibit 99.6 of the Company's Current Report on Form 8-K (file no. 001-16467) filed on August 4, 2020).
10.16+	Exchange Agreement, dated September 30, 2020, between RespireRx Pharmaceuticals Inc. and Timothy Jones (incorporated by reference to Exhibit 99.1 of the Company's Current Report on Form 8-K (file no. 001-16467) filed on October 5, 2020).
10.17+	Exchange Agreement, dated September 30, 2020, between RespireRx Pharmaceuticals Inc. and Jeff Eliot Margolis (incorporated by reference to Exhibit 99.2 of the Company's Current Report on Form 8-K (file no. 001-16467) filed on October 5, 2020).
10.18+	Exchange Agreement, dated September 30, 2020, between RespireRx Pharmaceuticals Inc. and Arnold S. Lippa (incorporated by reference to Exhibit 99.3 of the Company's Current Report on Form 8-K (file no. 001-16467) filed on October 5, 2020).
10.19+	Exchange Agreement, dated September 30, 2020, between RespireRx Pharmaceuticals Inc. and Marc Radin PC (incorporated by reference to Exhibit 99.4 of the Company's Current Report on Form 8-K (file no. 001-16467) filed on October 5, 2020).
10.20+	Exchange Agreement, dated September 30, 2020, between RespireRx Pharmaceuticals Inc. and Patent Network Law Group (incorporated by reference to Exhibit 99.5 of the Company's Current Report on Form 8-K (file no. 001-16467) filed on October 5, 2020).
31.1*	Officer's Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Officer's Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1**	Officer's Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2**	Officer's Certification Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS*	XBRL Instance Document
101.SCH*	XBRL Taxonomy Extension Schema Document
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document

+ Management contract, compensatory plan or arrangement.

* 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: November 23, 2020

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

Date: November 23, 2020

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: November 23, 2020

By: */s/ Timothy Jones*
Timothy Jones
Interim 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: November 23, 2020

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 September 30, 2020, 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: November 23, 2020

By: */s/ Timothy Jones*
Timothy Jones
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 September 30, 2020, 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: November 23, 2020

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