RespireRx Pharmaceuticals Inc.
Files June 30, 2017 Quarterly Report on Form 10-Q
And Provides Update

Glen Rock, N.J., August 25, 2017/Globe Newswire – RespireRx Pharmaceuticals Inc. (OTC QB: RSPI) ("RespireRx" or the "Company"), a leader in the development of medicines for the treatment of neurologically controlled respiratory disorders, including obstructive sleep apnea and opioid induced respiratory depression (a form of central apnea) and other respiratory and neurological conditions, has filed its June 30, 2017 Quarterly Report on Form 10-Q and is hereby providing an update on the Company's operating and financing activities and its plans for the remainder of 2017.

Comments by Chief Executive Officer

James S. Manuso, Ph.D., President, Chief Executive Officer and Vice Chairman of RespireRx, commented, "We are pleased to report that RespireRx has retained a leading advisory firm to assist in the Company's advancement of its objective to engage a partner for the further development into Phase 3 clinical trials of dronabinol for obstructive sleep apnea and of ampakines into Phase 2B clinical trials for the treatment of opioid-induced respiratory depression, a form of central apnea and other neurally mediated respiratory disorders. We look forward to reporting on our progress with respect to this iniative in the months ahead. Naturally, we continue to seek to raise additional capital to fund our operations and we are continuing our efforts to strengthen our balance sheet."

Corporate Overview

Key corporate developments during the three months ended June 30, 2017 included the following:

- On June 6, 2017 at the Sleep 2017 conference in Boston, MA, a podium presentation by the principal investigator described the breakthrough results, previously announced by the Company, of a Phase 2B study in which oral administration of dronabinol improved the symptoms of obstructive sleep apnea.

- Also at the Sleep 2017 conference, Senior Vice President of Research and Development, Richard Purcell presented a poster ("Poster") session entitled: "OPIOIDS AND SLEEP APNEA: ANTAGONISM OF REMIFENTANIL INDUCED RESPIRATORY DEPRESSION BY CX1739 IN TWO CLINICAL MODELS OF OPIOID INDUCED RESPIRATORY DEPRESSION." SLEEP 2017 was the 31st Annual Meeting of the Associated Professional Sleep Societies LLC ("APSS"), a joint venture of the American Academy of Sleep Medicine and the Sleep Research Society.

- The Company has advanced its discussions with potential strategic partners with respect to both its cannabinoid and its ampakine programs.

Subsequent to June 30, 2017:

- The Company initiated a new securities offering as described in its June 30, 2017 Quarterly Report on Form 10-Q

- The Company formalized by employment agreement amendment, the expanded role of Jeff Margolis as Senior Vice President and Chief Financial Officer in addition to his prior responsibilities as Treasurer and Secretary.

Financial Overview and Selected Financial Information

The Company incurred net losses of $1,584,066 and $2,731,433 for the three months ended June 30, 2017 and 2016, respectively, net losses of $3,053,212 and $5,412,200 for the six months ended June 30, 2017 and 2016 respectively, and negative operating cash flows of $456,393 and $867,898 for the six months ended June 30, 2017 and 2016, respectively. The Company expects to continue to incur net losses and negative operating cash flows for the next few years.

At June 30, 2017, the Company had 2,289,045 shares of common stock outstanding, as compared to 2,149,045 shares of common stock outstanding at December 31, 2016. The exercise of all outstanding stock options and warrants, and the conversion of all outstanding convertible debt securities, would have resulted in the issuance of an additional 2,707,345 shares of common stock as of June 30, 2017 as compared to 1,877,715 as of December 31, 2016.

At June 30, 2017, the Company had a working capital deficit of $6,336,751, as compared to a working capital deficit of $5,531,548 at December 31, 2016, reflecting an increase in the working capital deficit of $805,203 for the six months ended June 30, 2017. At June 30, 2017, the Company had cash aggregating $30,848, as compared to $92,040 at December 31, 2016, reflecting a decrease in cash of $61,192 for the six months ended June 30, 2017.

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. The Company regularly evaluates various measures to satisfy the Company's liquidity needs, including developing agreements with collaborative partners and, when necessary, seeking to exchange or restructure the Company's outstanding securities. 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. As indicated in the Company's June 30, 2017 Quarterly Report on Form 10-Q, RespireRx has initiated a new securities offering.

Additional information with respect to the Company's financial condition, results of operations, cash flows, capital structure and other matters involving the business, operations and research and development activities of the Company is included in the Company's Quarterly Report on Form 10-Q for the quarterly and six month periods ended June 30, 2017, as filed with the U. S. Securities and Exchange Commission.

About RespireRx Pharmaceuticals Inc.

RespireRx Pharmaceuticals Inc. is a leader in the development of medicines for neurologically controlled respiratory disorders, with a focus on sleep apneas and drug-induced respiratory depression. The Company owns patents and patent applications, and holds exclusive licenses, for certain families of chemical compounds that claim the chemical structures and their use in the treatment of these and other disorders. Pending additional funding, during 2017, the Company plans to: 1) file an IND and initiate a Phase 2 clinical trial investigating the ability of CX717 or CX1739 to improve breathing in patients with spinal cord injury; 2) meet with the FDA to discuss its Phase 3 clinical trial program to test the safety and efficacy of dronabinol (oral) for the treatment of Obstructive Sleep Apnea; and 3) file an IND and initiate a Phase 2 clinical trial investigating the ability of CX1739 to reduce central sleep apnea in patients taking chronic opioids.

RespireRx's pharmaceutical candidates in development are derived from two platforms, as described below.

One platform of medicines being developed by RespireRx is a class of proprietary compounds known as ampakines that act to enhance the actions of the excitatory neurotransmitter glutamate at AMPA glutamate receptor sites in the brain. Several ampakines in both oral and injectable form are being developed by the Company for the treatment of a variety of breathing disorders. Ampakines have also demonstrated that they may have utility to improve breathing in animal models of disorders such as spinal cord injury, Pompé Disease, and perinatal respiratory distress. The Company's compounds belong to a new class of ampakines that do not display the undesirable side effects previously reported for earlier generations of ampakines.

The other platform is the class of compounds known as cannabinoids, including dronabinol. Under a license agreement with the University of Illinois at Chicago, the Company has rights to patents claiming the use of cannabinoids for the treatment of sleep-related breathing disorders. The results of the PACE Phase 2B clinical study have been previously described by the Company in filings with the SEC as have the results of an earlier Phase 2A clinical study conducted by the Company. In both studies, dronabinol produced a statistically significant reduction in the AHI, the primary therapeutic end-point, and was observed to be safe and well-tolerated in a group of patients with OSA.

Additional information about the Company and the matters discussed herein can be obtained on the Company's web-site at www.RespireRx.com or in the Company's filings with the U.S. Securities and Exchange Commission on EDGAR at www.sec.gov.

Cautionary Note Regarding Forward-Looking Statements:

This press release contains certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 and the Company intends that such forward-looking statements be subject to the safe harbor created thereby. These might include statements regarding the Company's 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 are all forward-looking statements.

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

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

Factors that could cause or contribute to such differences include, but are not limited to, regulatory policies or changes thereto, available cash, research and development results, competition from other similar businesses, and market and general economic factors. This discussion should be read in conjunction with the condensed consolidated financial statements (unaudited) and notes thereto included in Item 1 of the Company's current Quarterly Report on Form 10-Q and the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2016, including the section entitled "Item 1A. Risk Factors." The Company does not intend to update or revise any forward-looking statements to reflect new information, future events or otherwise.

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