RespireRx Pharmaceuticals Inc. to Present at 10th Annual Biotech Showcase™ 2018

CEO to Review completed Phase IIB dronabinol trial for the treatment of Obstructive Sleep Apnea (OSA) and Provide Pipeline update

Glen Rock, N.J., Jan. 8, 2018/Globe Newswire – RespireRx Pharmaceuticals Inc. (OTC QB: RSPI) ("RespireRx" or the "Company"), a leader in the development of medicines for the treatment of respiratory disorders for which there are no approved pharmaceuticals, particularly sleep apneas and drug-induced respiratory depression, announces that the Company's President, Chief Executive Officer and Vice Chairman of the Board of Directors, James S. Manuso, Ph.D., will present at The Biotech Showcase™ on Tuesday, January 9, 2018 at 3:30 PM Pacific Standard Time (www.biotechshowcase.com or www.ebdgroup.com/bts/index.php). The Conference is co-sponsored by the EBD Group and Demy-Colton Life Sciences Advisors. Presentations will be held at the Hilton San Francisco Hotel in San Francisco, California from January 9 – 11, 2017.

Dr. Manuso will discuss the successfully completed Phase IIB PACE trial in which dronabinol was tested for the treatment of OSA, along with the successful results of Phase IIA trials testing CX-1739 for drug-induced respiratory depression and central sleep apnea. He will also provide background information and descriptions of other product pipeline candidates.

Dr. Manuso's presentation will be available by live webcast streaming online. To access the live audio webcast, go to:

https://pgi.webcasts.com/viewer/event.jsp?ei=1176868&tp_key=90197ad027

This link will enable access to the archived webcast. This press release with the live link will also be available on the company's website at www.respirerx.com, by going to the Investors tab. A copy of the slide presentation to be presented at the conference will be submitted to the Securities and Exchange Commission in a Current Report on Form 8-K prior to the presentation and will also be available in the investors section of RespireRx's website.

About RespireRx Pharmaceuticals Inc.

RespireRx Pharmaceuticals Inc. is a leader in the development of medicines for respiratory disorders, with a focus on sleep apneas and drug-induced respiratory depression. During 2018, the Company plans to meet with FDA to discuss its Phase III clinical trial program to test the safety and efficacy of dronabinol for the treatment of OSA. 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.

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

The first platform is the class of compounds known as cannabinoids, in particular, dronabinol. Under a license agreement with the University of Illinois, the Company has rights to patents claiming the use of cannabinoids for the treatment of sleep-related breathing disorders. In a double-blind, placebo-

controlled, dose-ascending Phase 2A clinical study conducted by the Company, dronabinol produced a statistically significant reduction in the Apnea-Hypopnea Index (AHI), the primary therapeutic end-point, and was observed to be safe and well-tolerated in a group of patients with OSA. Investigators at the University of Illinois and Northwestern University have completed their investigation of dronabinol in a potentially pivotal, six week, double-blind, placebo-controlled Phase 2B clinical trial in 56 patients with OSA. This study was fully funded by the National Heart, Lung and Blood Institute of the National Institutes of Health. The Company did not manage or fund this clinical trial.

The second 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. In a Phase IIA clinical trial testing CX-1739 for drug-induced respiratory depression, this medicine was shown to control respiratory depression produced by remifentanil, a potent opioid, without altering its analgesic effects. In another Phase IIA clinical trial, CX-1739 demonstrated preliminary efficacy in controlling central sleep apnea. Various ampakines have demonstrated improved breathing function in animal models of orphan disorders such as Pompé Disease, spinal cord damage and perinatal respiratory distress. The Company's compounds belong to a new class of ampakines that do not display undesirable side effects previously reported by earlier generations of ampakines.

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.

Clinical Trial Plans for 2018 - Phase III Clinical Trial Plans for Development of Dronabinol

As reported previously, RespireRx announced positive results for the PACE (Pharmacotherapy of Apnea by Cannabimimetic Enhancement) trial conducted by Dr. David Carley, Dr. Phyllis Zee and their colleagues at the University of Illinois at Chicago and Northwestern University, respectively. The PACE trial, a Phase 2B study of dronabinol for the treatment of OSA, clearly demonstrated that dronabinol significantly improved the primary outcome measures of AHI, daytime sleepiness as measured by the Epworth Sleepiness Scale ("ESS") and overall patient satisfaction as measured by the Treatment Satisfaction Questionnaire for Medications ("TSQM"). Based on these results, RespireRx will engage with FDA to agree upon the next steps in connection with the initiation of a pivotal Phase III clinical trial program testing the safety and efficacy of dronabinol in the treatment of obstructive sleep apnea.

Clinical Trial Plans for 2018 - Phase II Trial of CX1739 in Central Sleep Apnea

Pending additional financing and/or strategic relationships, the Company plans to conduct a Phase II, multiple dose clinical trial investigating the ability of CX1739 to improve breathing in patients with central sleep apnea. Of particular interest will be to look at patients undergoing chronic opioid treatment. In these patients, central sleep apnea is a major risk factor for opioid over-dose.

Other Potential Clinical Indications for Ampakines

While developing potential applications for respiratory disorders, RespireRx has retained and expanded its ampakine intellectual property and data with respect to neurological and psychiatric disorders and is considering developing certain indications, pending additional financing and/or strategic relationships. As an example, based on positive results from a Phase II clinical trial of CX717 in patients with Attention Deficit Hyperactivity Syndrome (ADHD), RespireRx has filed patent applications claiming the use of

ampakines for the treatment of ADHD and is seeking support for further clinical development in this area. In addition, animal studies conducted in collaboration with Dr. David Fuller and his colleagues at the University of Florida have demonstrated the ability of our lead ampakines to significantly improve breathing in animals with spinal cord injury. The Company believes that these results reflect a more general process whereby the ampakines might improve the motor nerve activity of a number of systems. While additional animal studies are planned at the University of Florida, the Company is also planning, pending additional financing, to conduct a Phase 2 clinical trial investigating the ability of our lead ampakines to improve breathing and motor function in spinal cord injury patients.

Comments by the Company's President and Chief Executive Officer

Dr. James S. Manuso, commented, "We look forward to advancing the many initiatives RespireRx is undertaking throughout the course of 2018. Now that the Company is Phase III-ready with respect to the final clinical and regulatory development of dronabinol for the treatment of OSA, commercialization and potential partnering plans may be initiated. With dronabinol's Phase III trial on the horizon, along with two Phase II ampakines in development, there are numerous strategic and operational milestones on the calendar. In 2018 we will continue to focus on the clinical and regulatory development of the Company's two proprietary platforms for addressing unmet needs in the sleep apnea and opioid-induced respiratory depression markets. In addition, we will continue to support the scientific research and pre-clinical development upon which our company is based. I look forward to reporting to you our progress in the months ahead"

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 as of and for the periods ending September 30, 2017 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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