RespireRx Pharmaceuticals Inc. Announces Participation SLEEP 2017 in Boston, MA

Senior Vice President of Research & Development to Present Poster Session on a Phase 2A Clinical Trial of CX1739 for the Prevention of Opioid Induced Respiratory Depression

Glen Rock, N.J., June 6, 2017, 5:00pm/Globe Newswire – RespireRx Pharmaceuticals Inc. (OTC QB: RSPI) ("RespireRx" or the "Company"), a leader in the development of medicines for the treatment neurologically controlled respiratory disorders for which there are no approved pharmaceuticals, announces that the Company's Senior Vice President of Research and Development, Richard Purcell will be presenting 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" at the Sleep 2017 conference in Boston, MA on June 6, 2017 from 5:00 – 7:00pm EDT. "The focus of the Phase IIA clinical trial was to advance the clinical proof of concept that CX1739, one of the Company's low-impact Ampakines®, has clinical utility for the treatment of respiratory depression resulting from high doses of opioids for pain management", said Mr. Purcell. "This research demonstrates not only the safety of the Ampakines, but also target-engagement of CNS neurons that drive respiratory function", he continued. "The data provide a clear clinical development path for CX1739 for treating CNS-driven respiratory disorders like central sleep apnea and spinal cord injury." The contents of the Poster will be submitted to the Securities and Exchange Commission in a Current Report on Form 8-K at the time of the presentation and will also be available in the investors section of the RespireRx website.

SLEEP 2017 is 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. Among other things, the APSS provides evidence-based education to advance the science and clinical practice of sleep medicine, disseminates research results, and promotes the translation of basic science into clinical practice.

In addition, a podium presentation describing the results, previously announced by the Company, of a Phase 2B study in which oral administration of dronabinol improved the symptoms of obstructive sleep apnea will be made at the same conference on June 6, 2017, from 1:45pm – 2:00pm EDT.

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, one of which is the subject of the poster session described above. 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 Phase 2B clinical study, previously described by the Company in filings with the SEC, is the subject of the podium presentation described above.

In an earlier placebo-controlled, dose-ascending Phase 2A clinical study conducted by the Company, 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.

Comments by the Company's President and Chief Executive Officer

Dr. James S. Manuso, commented, "We are pleased to be represented at this prestigious medical meeting and to continue informing the medical and research community of our leading research and clinical development work in the areas of apneas and other respiratory disorders, including apneas/respiratory depression caused by opioids, obstructive sleep apnea, disordered breathing associated with spinal cord injury and other neurologically controlled breathing disorders. I look forward to reporting to you our progress in the months ahead"

Special 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. Certain statements included or incorporated by reference in this news release, including information as to the future financial or operating performance of the Company and its drug development programs, constitute forward-looking statements. The words "believe," "expect," "anticipate," "contemplate," "target," "plan," "intend," "continue," "budget," "estimate," "may," "schedule" and similar expressions, both singular and plural, identify forward-looking statements. Forward-looking statements include, among other things, statements regarding future plans, targets, estimates and assumptions. Forward-looking statements are necessarily based upon a number of estimates and assumptions that, while considered reasonable by the Company, are inherently subject to significant business, economic and competitive uncertainties and contingencies. Many factors could cause the Company's actual results to differ materially from those expressed or implied in any forward-looking*

statements made by, or on behalf of, the Company. Due to these various risks and uncertainties, actual events may differ materially from current expectations. Investors are cautioned that forward-looking statements are not guarantees of future performance and, accordingly, investors are cautioned not to put undue reliance on forward-looking statements due to the inherent uncertainty therein. Forward-looking statements are made as of the date of this news release and the Company disclaims any intent or obligation to update publicly such forward-looking statements, whether as a result of new information, future events or results, or otherwise.

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