RESPIRERX PHARMACEUTICALS INC. SEND NOTICE LETTER TO THE BOARD OF DIRECTORS OF THERAPIX BIOSCIENCES LTD.

Glen Rock, N.J., July 30, 2019 /Globe Newswire – RespireRx Pharmaceuticals Inc. (OTCQB: RSPI) ("RespireRx" or the "Company"), a leader in the research and development of cannabinoids for the treatment of sleep-related breathing disorders, announces that it has sent a formal notice to the Board of Directors of Therapix Biosciences Ltd. (Therapix).

In public disclosures on the Therapix' website and in its press releases (most recently on July 23, 2019), Therapix has repeatedly made public statements that it intends to develop THX-110, a combination of dronabinol and PEA, for treating obstructive sleep apnea (OSA) in the United States and other markets.

RespireRx Pharmaceuticals Inc (RespireRx) has licensed and is in possession of patents and patent applications for treating any sleep related breathing disorder, including OSA, using any cannabinoid alone or in combination with any other molecule or drug.

Our existing patents and IP assets in development for related formulations and drug combinations, expressly exclude all use, production, sale or offer for sale of Therapix's proposed THC/PEA combination for OSA.

To the extent Therapix violates RespireRx's patent rights, anywhere in the world where these patents are applicable, we will vigorously enforce these rights, including through formal litigation with Therapix and against any of its affiliates, successors or assigns who may collaborate with Therapix to violate our intellectual property rights.

This press release constitutes notice to all interested parties that RespireRx objects to Therapix's repeated public announcements of a development plan for dronabinol/PEA for OSA and that these announcements are believed to constitute cause for immediate legal action to remedy Therapix's continuing, repeated interference with RespireRx's business practices.

We trust Therapix will dutifully comply with its obligations to advise all prospective partners, investors, shareholders and responsible regulatory authorities of the material content of this press release.

About RespireRx Pharmaceuticals Inc.

RespireRx Pharmaceuticals Inc. is a leader in the development of medicines for certain respiratory disorders and CNS indications, including OSA, attention deficit hyperactivity disorder (ADHD), spinal cord injury and other neurological conditions. The Company holds exclusive licenses and owns patents and patent applications or rights thereto for certain families of chemical compounds that claim the chemical structures and/or their uses in the treatment of a variety of disorders, as well as claims for novel uses of known drugs.

Cannabinoids. RespireRx is developing dronabinol, a synthetic derivative of a naturally occurring substance in the cannabis plant, for the treatment of OSA, a serious respiratory disorder that impacts an estimated 29.4 million people in the United States according to the American Academy of Sleep Medicine ("AASM"), published in August 2016. OSA has been linked to increased risk for hypertension, heart failure, depression, and diabetes, and has an annual economic cost in the United States of $162 billion according to the AASM. There are no approved drug treatments for OSA.

RespireRx believes, for the United States, pending the outcome of an intended meeting with the FDA, that it will be able to commence a Phase 3 clinical study for the treatment of OSA with dronabinol. The Company further believes that it would only require approval by the FDA of a 505(b)(2) new drug application ("NDA"), an efficient regulatory pathway.

RespireRx believes that the most direct route to commercialization in the US is to proceed directly to a Phase 3 pivotal trial using the currently available dronabinol formulation (2.5, 5 and 10 mg gel caps) and to then commercialize a RespireRx branded dronabinol capsule ("RBDC").

RespireRx also believes that there are numerous opportunities for reformulation of dronabinol to produce a second-generation proprietary, branded product for the treatment of OSA with an improved profile. Therefore, simultaneous with the development of the RBDC, RespireRx plans to develop a proprietary dronabinol formulation to optimize the dose and duration of action for treating OSA.

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Ampakines. The second platform of proprietary medicines being developed by RespireRx are ampakines, which act to enhance the actions of the excitatory neurotransmitter glutamate at AMPA glutamate receptors. RespireRx owns certain composition of matter and method of treatment patents and patent applications with respect to ampakines CX1739, CX717 and other ampakines.

Several ampakines, in both oral and injectable forms, are being developed by the Company for the treatment of a variety of CNS disorders. In a number of preclinical and clinical translational studies, the lead ampakines, CX1739 and CX717, have demonstrated target engagement at AMPA glutamate receptors by antagonizing the ability of opioids to depress respiration. In preclinical studies, these ampakines also have shown the ability to improve certain motor functions compromised by spinal cord injury and in certain orphan disorders, such as Pompe Disease and Rett's Syndrome.

Ampakines also have demonstrated positive activity in animal models of ADHD, results that have been extended translationally into statistically significant improvement of symptoms observed in a Phase 2 clinical trial of CX717 in adults with ADHD. At present, the major pharmacotherapies available for ADHD are made up of two types of drugs. Stimulants, such as amphetamine, rapidly produce robust effects, but suffer from side effects typical of stimulants, including tolerance, dependence, withdrawal and abuse. For these reasons, stimulants are scheduled by the FDA. Non-stimulants, such as Straterra® (atomoxetine) tend to be less effective than stimulants, with a much longer (approximately 4 – 8 week) latency to onset of action. In a number of animal and human studies, CX717 and other ampakines did not display any stimulant properties typically associated with drugs like amphetamine. In the Phase 2 ADHD clinical trial, statistically significant therapeutic effects were observed within one week. Therefore, we believe ampakines may represent a novel, non-stimulant treatment for ADHD with a more rapid onset of action than alternative non-stimulant treatment options.

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 Securities and Exchange Commission 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 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 "anticipates," "believes," "intends," "estimates," "expects," "plans," "contemplates," "targets," "continues," budgets," "may," and similar expressions 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 proposed products, (iv) reorganization plans, (v) the clinical development, regulatory review and commercialization process, and (vi) 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, 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 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, interest of third parties in collaborations with us, 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 Quarterly Report on Form 10-Q and the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2017, 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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