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CohBar Confirms Efficacy of Novel Apelin Agonists in Acute Respiratory Distress Syndrome (ARDS) Model

MENLO PARK, Calif., Dec. 09, 2020 (GLOBE NEWSWIRE) -- CohBar, Inc. (NASDAQ: CWBR), a clinical stage biotechnology company developing mitochondria based therapeutics to treat chronic diseases and extend healthy lifespan, today announced new preclinical data confirming the efficacy of its apelin agonist peptides in a preclinical model of acute respiratory distress syndrome (ARDS). The company expects the apelin agonists to have potential to treat COVID-19 associated ARDS as well as ARDS patients in general, of which there are approximately three million globally.

“These new positive preclinical results confirm previous data showing CB5064 Analogs reduce fluid accumulation and pro-inflammatory cytokine secretion, key processes underlying the lethal consequences of severe ARDS and COVID-19 associated ARDS,” said Kenneth C. Cundy, PhD, CohBar’s Chief Scientific Officer. “By engaging the apelin pathway, CohBar’s novel approach has the potential to treat ARDS and COVID-19 associated ARDS, while also reducing the global damage caused by a cytokine storm that reaches beyond the lungs to other organs such as the kidneys, liver, and heart. We plan to complete additional ongoing studies and submit the combined data for presentation at a future scientific meeting.”

In the preclinical study, acute lung injury was induced in mice by administration of lipopolysaccharide (LPS), a bacterial toxin that produces similar symptoms to other causes of ARDS, including fluid accumulation and cytokine secretion. A single dose of CB5064 Analog was administered one hour prior to the LPS exposure and effects on lung weight and levels of pro-inflammatory cytokines were measured at 4 hours after LPS exposure. Treatment with CB5064 Analogs reduced fluid accumulation in the lungs and a corresponding broad reduction in levels of key pro-inflammatory cytokines secreted into the lung fluid, when compared to treatment with a placebo control.

“ARDS is a major unmet medical need and there are no approved therapeutics for this devastating condition,” stated Professor Toby Maher, Director of Interstitial Lung Disease and Professor of Medicine at the Keck School of Medicine, University of Southern California. “The data for CohBar’s apelin agonists in this preclinical model are encouraging and support further advancement of the program towards candidate selection for clinical testing.”

Further details of these new data will be available on the CohBar website at www.cohbar.com.

About the Apelin Receptor and Apelin

The apelin receptor is broadly expressed and abundant in lung tissue and published preclinical studies have shown that apelin signaling can reduce the severity of acute lung injury, by reducing lung fluid accumulation, hypoxemia, and cytokine secretion, which also occur in COVID-19 associated ARDS and lead to downstream injury to kidney, heart, and other organs.

Apelin is an endogenous peptide released by fat cells that activates the apelin receptor, a key cell surface receptor involved in protective regulation of fluid homeostasis, cardiovascular function, and metabolism. In addition to its protective effects in lung injury, apelin has also been shown to reduce body weight and improve insulin sensitivity in obese mice. Published clinical reports show that obesity and diabetes are major underlying risk factors in severe COVID-19, with a mortality rate of 7.8% in patients with type 2 diabetes versus 2.7% in patients without this comorbidity.

About ARDS

In addition to COVID-19, ARDS can be triggered by viral or bacterial pneumonia, sepsis, trauma or other events and represents a major cause of morbidity and mortality. There is an unmet need for a safe and effective treatment of ARDS due to its high mortality rate and lack of effective drug treatments. It also prolongs hospital stays and requires convalescence in the hospital and rehabilitation. An effective therapy would reduce time on ventilators and in the ICU, reduce mortality, and improve quality of life. ARDS affects approximately three million patients globally.

About CohBar

CohBar (NASDAQ: CWBR) is a clinical stage biotechnology company focused on the research and development of mitochondria based therapeutics, an emerging class of drugs for the treatment of chronic and age-related diseases. Mitochondria based therapeutics originate from the discovery by CohBar's founders of a novel group of naturally occurring peptide sequences within the mitochondrial genome, some of which have been shown to have the potential to regulate key processes in multiple systems and organs in the body. To date, the company has discovered more than 100 mitochondrial derived peptides and generated over 1,000 analogs. CohBar's efforts focus on the development of these peptides into therapeutics that offer the potential to address a broad range of diseases because of the underlying impact of mitochondrial dysfunction. The company's lead compound, CB4211, is in the Phase 1b stage of a Phase 1a/1b clinical trial for NASH and obesity. In addition, CohBar has four preclinical programs: CB5138 Analogs for fibrotic diseases, CB5064 Analogs for COVID-19 associated ARDS, MBT5 Analogs for CXCR4-related cancer and orphan diseases, and MBT3 Analogs for cancer immunotherapy.

For additional company information, please visit www.cohbar.com.

Forward-Looking Statements

This news release contains forward-looking statements which are not historical facts within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are based only on our current beliefs, expectations and assumptions regarding the future of our business, future plans and strategies, projections, anticipated events and other future conditions. In some cases you can identify these statements by forward-looking

words such as “believe,” “may,” “will,” “estimate,” “continue,” “anticipate,” “intend,” “could,” “should,” “would,” “project,” “plan,” “expect,” “goal,” “seek,” “future,” “likely” or the negative or plural of these words or similar expressions. Examples of such forward-looking statements include but are not limited to statements regarding anticipated outcomes of research and clinical trials for our mitochondria based therapeutic (MBT) candidates; expectations regarding the growth of MBTs as a significant future class of drug products; and statements regarding anticipated therapeutic properties and potential of our mitochondrial peptide analogs, MBTs and other potential therapies, including but not limited to in the treatment of IPF. You are cautioned that such statements are not guarantees of future performance and that actual results or developments may differ materially from those set forth in these forward-looking statements. Factors that could cause actual results to differ materially from these forward-looking statements include: our ability to successfully advance drug discovery and development programs, including the delay or termination of ongoing clinical trials; our possible inability to mitigate the prevalence and/or persistence of the injection site reactions, receipt of unfavorable feedback from regulators regarding the safety or tolerability of CB4211 or the possibility of other developments affecting the viability of CB4211 as a clinical candidate or its commercial potential; results that are different from earlier data results including less favorable than and that may not support further clinical development; our ability to raise additional capital when necessary to continue our operations; our ability to recruit and retain key management and scientific personnel; the risk that our intellectual property may not be adequately protected; our ability to establish and maintain partnerships with corporate and industry partners; and risks related to the impact on our business of the COVID-19 pandemic or similar public health crises. Additional assumptions, risks and uncertainties are described in detail in our registration statements, reports and other filings with the Securities and Exchange Commission and applicable Canadian securities regulators, which are available on our website, and at www.sec.gov or www.sedar.com.

You are cautioned that such statements are not guarantees of future performance and that our actual results may differ materially from those set forth in the forward-looking statements. The forward-looking statements and other information contained in this news release are made as of the date hereof and CohBar does not undertake any obligation to update publicly or revise any forward-looking statements or information, whether as a result of new information, future events or otherwise, unless so required by applicable securities laws. Nothing herein shall constitute an offer to sell or the solicitation of an offer to buy any securities.

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