Respira Therapeutics Awarded NIH Grant for the Development of Novel Inhaled Drug Formulations Targeting the Small Airways of Pediatric Asthma Patients

ALBUQUERQUE, N.M., July 30, 2019—Respira Therapeutics, Inc., a clinical-stage company developing inhaled therapeutics for cardiopulmonary diseases that improve patient outcomes through enhanced drug targeting to the small airways of the lung, announced today that the company has been awarded a Phase 1 Small Business Innovation Research (SBIR) grant from the National Institutes of Health (NIH). The six-month, $224,974 award will support the development of the company’s novel, microleucine carrier-based inhaled drug formulation for delivery of corticosteroids to the small airways of pediatric asthma patients.

“Current inhalers and drug formulations used by pediatric asthma patients show poor drug delivery to the lungs—most of the medicine deposits in the mouth and throat of the patient, and very little reaches the small airways,” said Jeff Weers, PhD, Chief Technical Officer of Respira. “We are grateful to the NIH for this financial support of our efforts to address this important unmet need with the development of a new formulation platform based on adhesive mixtures of nanoparticles of drug adhered to nanoleucine carrier particles. We expect this platform to enable drug particles to largely bypass deposition in the upper respiratory tract, with improved delivery into the small airways within the lungs.”

Asthma is prevalent in more than 9% of the pediatric population, with the disease of most pediatric patients uncontrolled or poorly controlled. Extensive inflammation of the airways in asthma is treated using inhaled corticosteroids (ICS) as a maintenance therapy. These drugs can suppress growth in children, however, and fear of this outcome can lead to non-adherence in pediatric patients, resulting in poor asthma control. A strategy titrating ICS therapy to the lowest effective dose to minimize the risk of growth suppression is complicated by poor delivery efficiency of currently marketed inhalers, which deposit the majority of the dose (>70%) in the upper respiratory tract. This often results in delivery of sub-therapeutic doses and leads to unwanted local side effects. In children, this is further complicated by decreased inspiratory effort and lung volume. The issues with poor delivery efficiency become magnified when one considers that the small airways contribute substantially to asthma. Overall, the poor delivery efficiency of marketed dry powder inhalers means that only a small fraction of the nominal dose (<10%) reaches the small airways.

This ongoing development is supported by the Eunice Kennedy Shriver National Institute of Child Health & Human Development under Award Number 1R43HD100216-01. This press release does not necessarily represent the official views of the National Institutes of Health.

About Respira Therapeutics
Respira Therapeutics is a clinical-stage company developing inhaled therapeutics for cardiopulmonary diseases that improve patient outcomes through enhanced drug targeting to the
small airways of the lung. Respira's approach combines state-of-the-art, proprietary inhaled drug formulations with dry powder inhaler device technologies to create novel therapeutic products designed to improve dose consistency while enhancing delivery to the lung periphery. Respira’s lead product candidate, RT234-PAH, has received FDA Orphan Drug Designation for Pulmonary Arterial Hypertension and is in Phase 2 clinical trials as a first-in-class inhaled therapeutic for as-needed use to provide acute relief for the most commonly reported symptoms in PAH patients. Learn more at www.respiratherapeutics.com.

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