



Indiana Center for Vascular Biology and Medicine
Newsletter Summer 2017
Vessels and Vitality



Each year, more than 25 million people in the U.S. suffer from Chronic Obstructive Pulmonary Disease (COPD), a life-threatening disease that causes increased breathlessness, wheezing and tightness in the chest. COPD is a very common and severe problem that represents a large unmet global need. By 2020, it is estimated that COPD will be the third leading cause of death. This disease is characterized by inflammation and progressive destruction of lung tissue, leading to difficulty in breathing.



Matthias Clauss, Ph.D.

Dr. Matthias Clauss, Indiana University Research Professor of Cellular & Integrative Physiology in the Indiana Center for Vascular Biology & Medicine, Indiana University School of Medicine (ICVBM), and Dr. Irina Petrache, chief, Division of Pulmonology, Critical Care and Sleep Medicine, National Jewish Health, (formerly with Indiana University and the ICVBM) have been investigating the novel concepts that symptoms of COPD can be weakened and that progress of the disease can be halted by anti-inflammatory factors released by adult-derived stem cells as well as by administration of antibodies which block an inflammatory molecule known as EMAP-II. EMAP-II was discovered and described for the first

time by Dr. Clauss more than a decade ago, and since that time he has worked to understand its effects.

His research on blocking the negative effects of EMAP-II was started and continues with the support of the ICVBM. During the last several months his work received new investments from BioCrossroads' Indiana Seed Fund II, BioMotiv, and Indiana University's Innovate Indiana Fund to advance the development of therapeutics for the treatment of COPD and other respiratory disorders, including acute lung injury. In addition, this research has received significant grant support from the National Institutes of Health, Small Business Innovation & Research program. Because of this influx of support and development, Drs. Clauss and Petrache have recently formed Allinaire Therapeutics LLC, a life sciences start-up company focusing on innovative therapeutics for pulmonary diseases.

Support from the **Cryptic Masons Medical Research Foundation (CMMRF)** through the ICVBM helped to start and get this research to where it is today. **CMMRF** provides the type of seed investment that has allowed our team to undertake **high-risk/high-reward projects** and to **support promising researchers** to obtain additional funding, driving research and healthcare forward. New business and new innovation is good for the state, nation, and ultimately patients who will benefit directly from new treatments.