

# Press Release September 22nd, 2020

# Lipigon Pharmaceuticals announces collaboration with Singapore lung health initiative TARIPH and Shenzhen Institutes of Advanced Technology to study a potential novel treatment for COVID-19

Lipigon Pharmaceuticals AB ("Lipigon"), today announced that the company has entered into a collaboration agreement with The Academic Respiratory Initiative for Pulmonary Health (TARIPH) at Nanyang Technological University, Singapore ("NTU Singapore") and Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences (SIAT). The parties will collaborate on a potential novel treatment for Acute Respiratory Distress Syndrome (ARDS), a common and lethal co-morbidity of pneumonia caused by SARS-CoV-2 pandemic and other infectious lung disorders.

"This is a strategically important collaboration that allows Lipigon to test its drug candidates for potential use in treatment in Covid-19 and other infectious lung diseases. It is a great opportunity for us to work with leading experts in this area" explains CEO and co-founder Dr. Stefan K Nilsson.

Lipigon, TARIPH and SIAT will collaborate in the validation of antisense oligonucleotide (ASO) drug candidates targeting angiopoietin-like 4 (ANGPTL4). As part of TARIPH, Associate Professor Nguan Soon Tan's research group at NTU's Lee Kong Chian School of Medicine has shown in several publications that ANGPTL4 plays an important role in lung injury, as it was among the most significantly upregulated genes in the 1918 Spanish flu and 2009 H1N1 swine flu pandemics.

Lipigon has developed ASO drug candidates targeting ANGPTL4 that potentially could treat patients suffering from inflammation-associated lung injury including ARDS. These compounds will be tested by Professor Tan and collaborators, in advanced disease models to provide proof-of-concept for this novel treatment. The compounds have been optimized for efficacy and safety by Lipigon. If proven efficient for treating ARDS these compounds could immediately enter non-clinical safety trials.

"Professor Tan's outstanding research on pulmonary vasculature leakiness and pathological angiogenesis has established ANGPTL4 as a promising drug target. We are extremely happy and fortunate to enter this collaboration which gives our compounds a fast-track to proof of concept in relevant disease models", said Dr. Stefan K. Nilsson. "The SAR-CoV-2 pandemic has pinpointed a significant medical need for novel treatments of all infectious lung diseases. We believe that ANGPTL4 inhibition could make a difference for millions of patients every year".

"Over the last decade, our laboratory findings have suggested that when the expression of ANGPTL4 is suppressed, the duration and severity of lung damage is also reduced, suggesting a strong possibility for faster recovery. I hope our collaboration will lead to significant clinical benefit to patients suffering from lung injury caused by severe pneumonia," said Associate Professor Nguan Soon Tan.

"Our research on ANGPTL4 function in acute lung injury showed potential of ANGPTL4 as a broadspectrum therapy target for pneumonia. We hope our collaboration can provide new tools for clinicians," said Associate Professor Liang Li.

To accelerate the preclinical validation of ANGPTL4 ASO for lung injury, research will be carried out by Professor Tan and his colleagues, including Provost's Chair in Molecular Medicine Assistant Professor Sanjay Chotirmall and Dr Louisa Chan from LKCMedicine, as well as Associate Professor Li Liang from Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences.



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#### **About ANGPTL4 and ARDS**

Pneumonia kill millions of individuals, most commonly from severe inflammatory response causing damages to the lungs. ANGPTL4 is a gene associated with acute lung injury in both viral and bacterial pneumonia; mainly by promoting pathological angiogenesis and vascular leakage. Infectious lung disease may lead to acute respiratory distress syndrome (ARDS) which is a life-threatening syndrome characterized by acute inflammation in combination with respiratory failure. Patients are commonly treated with oxygen and often mechanical ventilation at intensive care units. Treatment of the infection that causes pneumonia is sometimes not possible, as in the case of SARS-CoV-2 infection and COVID-19, thus there is a great unmet medical need for novel ARDS treatments.

### **About Lipigon Pharmaceuticals AB**

Lipigon develops novel therapeutics for patients with lipid-related disorders. The company is a spin-off from Umeå University, Sweden, based on five decades of lipid research. Our primary focus is orphan lipid disorders and in addition to the ANGPTL antisense program, Lipigon's pipeline includes a program for gene therapy in lipodystrophy, together with Combigene AB (publ) and a small molecule program in collaboration with HitGen (Inc).

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