

APEIRON Biologics Initiates Phase II Clinical Trial of APN01 for Treatment of COVID-19

- Regulatory approvals obtained for the treatment of 200 COVID-19 patients in Austria, Germany and Denmark; Austrian government to provide significant financial support
- APN01 has the potential to block the infection of cells by the novel COVID-19 virus and reduce lung injury
- APN01 was previously proven to be safe and well tolerated in Phase I and Phase II clinical trials
- First patient expected to be dosed shortly

Vienna, Austria, 02 April 2020: APEIRON Biologics AG today announced that it has received regulatory approvals in Austria, Germany and Denmark to initiate a Phase II clinical trial of APN01 to treat COVID-19. APN01 is the recombinant form of the human angiotensin-converting enzyme 2 (rhACE2), and has the potential to block the infection of cells by the novel SARS-CoV-2 virus (COVID-19), and reduce lung injury. The Phase II trial aims to treat 200 severely infected COVID-19 patients, and the first patients are expected to be dosed shortly.

APN01 has a unique dual mode of action. APN01 imitates the human enzyme ACE2, which is used by the virus to enter cells. The virus binds to soluble ACE2/APN01, instead of ACE2 on the cell surface, which means that the virus can no longer infect the cells. At the same time, APN01 reduces the harmful inflammatory reactions in the lungs and protects against acute lung injury (ALI/acute respiratory distress syndrome (ARDS)).

“Based on its unique dual mechanism of action, APN01 has the potential to be the first drug approved to treat COVID-19 that specifically targets the new SARS-CoV-2 virus,” said **Peter Llewellyn-Davies, Chief Executive Officer of APEIRON Biologics AG**. “We look forward to dosing the first patient in our Phase II trial shortly, with the goal of providing a safe and effective treatment option for severely infected COVID-19 patients in urgent need of help. We are grateful to the regulatory authorities in Austria, Germany and Denmark for rapidly approving this study, and for the commitment of the Austrian Government, which has agreed to fund a significant portion of this trial.”

The randomized, double-blind Phase II trial will compare APN01 to placebo in up to 200 patients at 10 sites in Austria, Denmark and Germany. The primary objective of the trial is to assess the clinical efficacy and safety of APN01 in severe COVID-19 patients using, among other criteria, the need for invasive mechanical ventilation. Secondary objectives include the evaluation of measurable biological biomarker changes following treatment with APN01.

APN01 has been shown to be safe and well-tolerated in a total of 89 healthy volunteers and patients with pulmonary arterial hypertension (PAH) and ALI/ARDS in previously completed Phase I and Phase II clinical trials. The product candidate is currently in Phase

II development by APEIRON Biologics for the treatment of PAH and ALI/ARDS, which is a significant cause of COVID-19-related mortalities.

“Importantly, the novel coronavirus strain SARS-CoV-2 is a very close relative of the first SARS-CoV virus, which emerged globally in 2002, as it critically relies on the ACE2 receptor to infect the human cell,” explained **Prof. Josef Penninger, MD, co-inventor of APN01, founder of APEIRON Biologics AG, member of its supervisory board and Professor at the University of British Columbia.** “There is significant scientific evidence suggesting that treatment with the dual action recombinant human ACE2 can be used to treat patients with COVID-19. We are blocking the door for the virus and, at the same time, protecting tissues, which is what ACE2 normally does.”

“We are eager to participate in this very promising and critical study. APN01 is an advanced drug candidate with a very strong dual rationale that may provide an important therapeutic contribution to fight the COVID-19 pandemic,” said **Prof. Henning Bundgaard, principal investigator of the study and professor at the Faculty of Health and Medical Sciences at the University of Copenhagen.**

The following centers, among others, will participate in the clinical trial: in Germany, the University Medical Center Hamburg-Eppendorf and the Klinikum rechts der Isar of the Technical University of Munich; in Austria, the Medical University of Vienna, the Kaiser Franz-Josef-Spital, Vienna, the Medical University of Innsbruck and the University Medical Center Salzburg; in Denmark, the National University Hospital, Rigshospitalet (Copenhagen), the Herlev Gentofte Hospital, the Hvidovre Hospital, and the Nordsjællands Hospital (Hillerød).

CTC North GmbH & Co. KG, a medical contract research organization at the University Medical Center Hamburg-Eppendorf, will be responsible for the study-specific organization of the clinical trial.

About APN01

APN01 is a recombinant human Angiotensin Converting Enzyme 2 (rhACE2) and was developed by APEIRON biologics for the treatment of acute lung injury (ALI), acute respiratory distress syndrome (ARDS) and pulmonary arterial hypertension (PAH). After licensing from APEIRON in February 2010, GlaxoSmithKline (GSK) conducted several clinical trials from 2014 to 2017 to treat ALI/ARDS and PAH patients, lung injury being the major source of Covid-2019 mortalities, the disease caused by the new corona virus SARS-CoV-2. In 2019, APEIRON obtained the APN01 licenses back from GSK for further clinical development, after a their strategic refocusing of GSK to oncology.

The ACE2 receptor is expressed in human airway epithelia as well as lung parenchyma and was previously identified as the essential gateway used by the first SARS-CoV virus to infect human cells. ACE2 is also the critical receptor for the new virus SARS-CoV-2 to enter human cells. Thus, treatment with recombinant human ACE2 could be used to not only block viremia but also protect lungs and other organs from injury. The drug candidate is

administered intravenously as an infusion and has already shown safety and tolerability in 89 patients and volunteers.

About APEIRON Biologics AG

APEIRON Biologics is a privately-held European biotech company based in Vienna, Austria, focused on the discovery and development of novel cancer immunotherapies and respiratory diseases. APEIRON received EU marketing approval for APN311 (Dinutuximab beta, Qarziba®) in 2017 for the treatment of pediatric neuroblastoma patients and out-licensed global, exclusive rights for this product to EUSA Pharma Ltd. APEIRON now leverages its proprietary master checkpoint blockade mechanism to enable the human body's natural defense mechanisms to fight the tumor. APEIRON's clinical program APN401 is a first-in-class autologous cellular therapy to strengthen immune reactivity via an intracellular master checkpoint, Cbl-b. APEIRON's APN01 (rhACE2) is starting a Phase II trial in Europe to treat COVID-19. APEIRON's projects and technologies are bolstered by a strong patent portfolio. APEIRON's development expertise is validated through partnerships with leading pharmaceutical companies and academic institutions.

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FORWARD LOOKING STATEMENTS

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