Ossianix Announces Publication of Positive Preclinical Data on Neutralizing SARS-CoV-2 Infection with a Panel of Single Domain Shark VNAR Antibodies

A highly potent panel of VNARs against the SARS-CoV-2 spike protein has been isolated

Neutralization of SARS-CoV-2 was demonstrated in *in vitro* infectivity assays

In vitro blocking activities were also found against the N501Y and E484K mutants

Philadelphia, PA, USA; Graz, Austria, June 10, 2021 – Ossianix, an antibody engineering company, and the University of Graz today announced the publication of a preclinical study that describes discovery of highly potent neutralizing single domain shark antibodies (VNARs) directed against the SARS-CoV-2 spike protein. The study, "Single domain shark VNAR antibodies neutralize SARS-CoV-2 infection *in vitro*," was published in *bioRxiv* on June 8, 2021. Single-domain VNAR antibodies are attractive therapeutics in the fight against COVID-19 as they not only interact with unique epitopes inaccessible to regular immunoglobulin G (IgG) but also are small in size and highly stable.

The study was conducted by Ossianix's team led by Dr. Pawel Stocki in conjunction with Dr. Andreas Kungl, Professor at the University of Graz, Austria. The trial tested a panel of ten VNAR antibodies that blocked the interaction of the spike protein with its receptor ACE2 and effectively neutralized the SARS-CoV-2 virus *in vitro*. A number of these VNARs were also found to block the interaction between spike protein mutants (N501Y and E484K) and the ACE2 receptor.

"The fight to control the COVID-19 pandemic will require a broad range of therapeutic approaches," said Dr. Frank S. Walsh, CEO of Ossianix. "Vaccination is the primary strategy, but therapeutic antibodies will also have an important role to play in treating the infection. Shark single-domain VNAR antibodies against SARS-CoV-2 are potent therapeutics and complement the human IgG approaches. Their small size, ability to be used in various formulations such as inhalation and the comparatively low cost of goods make them an attractive addition to existing

approaches. These antibodies can be used either as single or combination therapeutics."

Dr. Kungl added, "We were very intrigued by the highly potent anti-viral activity of Ossianix' VNARs in inhibiting viral infection and propagation. Taken together with their physical stability, a very patient-friendly dose-response for these biologics can be expected for the treatment of COVID-19 infections."

About Ossianix
Ossianix is an antibody engineering company that utilizes single-domain antibodies (VNARs) from the shark to develop novel biopharmaceuticals for a number of therapeutic areas including CNS, immunology and oncology. The company was founded by former senior executives from Wyeth and Pfizer and is based in Philadelphia, PA, with research laboratories in Stevenage, UK. For more information, please visit www.ossianix.com.

About University of Graz
At the University of Graz, researchers and students work across a broad spectrum of fields to find solutions for tomorrow's world. The scientists address some of the key challenges of our society and are working to develop strategies for tackling them. How to respond to climate change, for example, and how to fight diseases of the metabolism and of old age – these and other important topics are studied through our innovative programs. Students learn to apply their knowledge and findings effectively to help shape our future.

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