NEUTROLIS ANNOUNCES DEVELOPMENT OF FIRST-IN-CLASS TREATMENT TARGETING NEUTROPHIL EXTRACELLULAR TRAPS (NETS) FOR PATIENTS WITH SEVERE COVID-19

- Novel Chromatinase™ platform could rapidly and systemically removes NETs associated with exacerbation of COVID-19
- Investigational biologic aims to treat hyperinflammation and thrombosis in COVID-19 patients, including those with Acute Respiratory Distress Syndrome (ARDS)
- Neutrolis awarded competitive grant from the National Institutes of Health (NIH)
- Recent study published in The Lancet EBioMedicine found NETs in COVID-19 patients

CAMBRIDGE, MA – August 3, 2020 -- Neutrolis, a biotechnology company developing therapeutics that target neutrophils, the most abundant immune cells in the body, today announced the development of NTR-441, a first-in-class DNASE1L3 enzyme analog that has the potential to rapidly and systemically clear neutrophil extracellular traps (NETs) for severe cases of COVID-19. NETs are a fundamental arm of the immune system and play an important role in chronic and acute diseases.

"We believe NETs are the common factor that explains the mysterious multisystem complications of COVID-19," said Toby Fox, Ph.D., Chief Executive Officer and Co-Founder of Neutrolis. "Our lead compound, NTR-441, and other molecules from our Chromatinase™ platform are the only drugs currently in development that could systemically remove NETs from the body. Thanks in part to competitive funding from the National Institutes of Health (R43HL150944), we will test whether NTR-441 is effective in ARDS, the most lethal manifestation of COVID-19."

Several independent investigators have observed NETs in the lungs of autopsied COVID-19 patients, and observed that NETs biomarkers in patient blood correlate with the clinical severity of COVID-19.

"We just published a study of patients who succumbed to COVID-19 in EBioMedicine published by The Lancet. Surprisingly, we found NETs congesting blood vessels in the lungs of all patients. Clearing these NETs with NTR-441 to restore blood flow may help patients survive COVID-19," said Martin Herrmann, M.D., Ph.D., Professor of Experimental Medicine from the University Hospital Erlangen in Germany, who has studied NETs extensively for the past 15 years.

"NETs may also induce microthrombosis in many organs causing organ failure or strokes. All of these thrombotic events are highly prevalent in COVID-19 patients," said Denisa Wagner, Ph.D., Edwin Cohn Professor of Pediatrics at Boston Children's Hospital (BCH), Harvard Medical School, which licensed Neutrolis some of the intellectual property that underpins the Chromatinase™ platform.

"NETs are a fundamental but unaddressed culprit in a wide array of human diseases. As a critical care specialist and pulmonologist, I think that an efficient therapy against NETs will be important for patients with COVID-19 and other causes of ARDS," said Mark Looney, M.D., Professor of Medicine at University of California, San Francisco and an expert in ARDS. "If proven safe and effective, NTR-441 could benefit a wide array of patients long after the coronavirus pandemic has ended."

About NTR-441

- NTR-441—an engineered analog of the natural NET-destroying enzyme DNASE1L3—is the world's first investigational drug that can be systemically delivered to accurately target NETs.
- In patients with severe COVID-19, the circulating levels of DNASE1L3 are not adequate to counteract the rapid and systemic formation of NETs.
- NTR-441 has the potential to systemically clear NETs in the vasculature and end organs like the lungs in patients suffering from severe COVID-19.

About NETs

- NETs are sticky, web-like structures made of chromatin—DNA studded with structural proteins—and expelled by suicidal neutrophils.
- NETs block air sacs and blood vessels in the lungs, trigger hyperinflammation and blood clotting (thrombosis), potentially causing irreversible end-organ damage and death.

About Neutrolis

Neutrolis is a biotechnology company developing first-in-class therapies that target neutrophils and their pathogenic products, including NETs. Neutrolis' proprietary platform, Chromatinase™, is based on the naturally occurring enzymes that break down the extracellular chromatin that form NETs. The company's lead product, NTR-441, is a patented, first-in-class, engineered DNASE1L3 analog with potential application in COVID-19, ARDS, lupus, rheumatoid arthritis, systemic sclerosis and other NET-mediated diseases. Neutrolis has received two competitive LabCentral Golden Ticket awards from Pfizer and Bristol-Myers Squibb. The company is privately held and has been supported to date by First Rice Capital and Prefix Capital, as well as individual investors and funding from the National Institutes of Health. It was founded by Drs. Toby Fox and Abdul Hakkim, two of the earliest and most cited leaders in the NETs field.

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