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NeuroRx and Relief Therapeutics Meet 165 Patient Enrollment Target in Phase 2b/3 Trial of RLF-100™ for Critical COVID-19 with Respiratory Failure

RADNOR, Pa. and GENEVA, Dec. 7, 2020 /PRNewswire/ -- NeuroRx, Inc. and Relief Therapeutics Holdings AG (SIX:RLF,OTCQB: RLFTF) ("Relief") today announced that they have met the 165 patient enrollment target agreed with the U.S. Food and Drug Administration (FDA) in the ongoing phase 2b/3 trial of RLF-100™ (aviptadil) for treating Respiratory Failure in patients with Critical COVID-19. Respiratory Failure is defined, according to the FDA, as the need for intensive care with mechanical ventilation, non-invasive ventilation, or high-flow nasal oxygen in order to sustain adequate levels of blood oxygen.

"Although enrollment has been uniquely challenged by the devastating effects of the pandemic, straining the capacity of hospitals and exposing our investigators and study coordinators to personal peril from COVID-19 in the course of their duties, we are proud to meet our enrollment target as planned," said Prof. Jonathan Javitt, CEO and founder of NeuroRx, Inc. "Achieving this milestone in the midst of the pandemic has only been possible because of the extraordinary dedication of the doctors, nurses, pharmacists, and study coordinators who continued to work around the clock to develop this much-needed therapy."

There is currently no FDA-approved drug that has shown efficacy in patients who are already in the Intensive Care Unit (ICU) with Respiratory Failure. In addition to the ongoing phase 2b/3 trial, more than 200 patients with Critical COVID-19 and respiratory failure have been treated in an FDA-approved, Expanded Access Protocol (EAP) for RLF-100™. These patients were unable to enter the phase 2b/3 randomized trial due to severe comorbidities (such as organ transplant, recent heart attack, or cancer). While the companies have focused first on those patients who have no medical alternative and are at immediate risk of death, a phase 2b/3 trial with RLF-100™ for inhaled use in patients with moderate and severe COVID-19 in order to prevent progression to respiratory failure is expected to start soon.

Although the phase 2b/3 study will remain blinded until the final patients reach day 28, unexpected rapid recovery on chest X-ray has been reported by study sites and frequently reported in the open-label Expanded Access Protocol as well. In the EAP, of the 90 patients who have reached 28 days post-treatment, 72% have survived to day 28. The clinical trial will continue to enroll patients through the anticipated early Q1 2021 announcement of top line data in order to amass as large a safety database as possible.

To date, no drug-related Serious Adverse Event has been reported in any of the ongoing studies of RLF-100, which is consistent with the absence of toxicity seen in extensive nonclinical safety testing and prior human studies.

About VIP in COVID-19

Vasoactive Intestinal Polypeptide (VIP) was first discovered by the late Dr. Sami Said in 1970. Although first identified in the intestinal tract, VIP is now known to be produced throughout the body and to be primarily concentrated in the lungs. VIP has been shown in more than 100 peer-reviewed studies to have potent anti-inflammatory/anti-cytokine activity in animal models of respiratory distress, acute lung injury, and

inflammation. Most importantly, 70% of the VIP in the body is bound to a rare cell in the lung, the alveolar type II cell (ATII), that is critical to transmission of oxygen to the body.

COVID-19-related respiratory failure is caused by selective infection of the ATII cell by the SARS-CoV-2 virus. They are vulnerable because of their (ACE2) surface receptors, which serve as the route of entry for the virus. These specialized cells manufacture surfactant that coats the lung and is essential for oxygen exchange. Loss of surfactant causes collapse of the air sacs (alveolae) in the lung and results in respiratory failure.

VIP is shown to block Coronavirus replication in the ATII cell, block cytokine synthesis, block viral-induced cell death (cytopathy), and upregulate surfactant production. Other than RLF-100™, no currently proposed treatments for COVID-19 specifically target these vulnerable Type II cells.

About RLF-100™

RLF-100™ (Aviptadil) is a formulation of Vasoactive Intestinal Polypeptide (VIP) that was developed based on Prof. Sami Said's original work at Stony Brook University, for which Stony Brook was awarded an FDA Orphan Drug Designation in 2001. VIP is known to be highly concentrated in the lungs, where it inhibits coronavirus replication, blocks the formation of inflammatory cytokines, prevents cell death, and upregulates the production of surfactant. FDA has now granted IND authorization for intravenous and inhaled delivery of RLF-100™ for the treatment of COVID-19 and awarded Fast Track designation. RLF-100™ is being investigated in two placebo-controlled US Phase 2b/3 clinical trials in respiratory deficiency due to COVID-19. Since July 2020, more than 300 patients with Critical COVID-19 and Respiratory Failure have been treated with RLF-100™ between the two FDA-approved protocols (randomized and expanded access). Information on the RLF-100™ Expanded Access program is at https://www.neurorxpharma.com/our-services/rlf-100.

About RELIEF THERAPEUTICS Holding AG

Relief focuses primarily on clinical-stage programs based on molecules of natural origin (peptides and proteins) with a history of clinical testing and use in human patients or a strong scientific rationale. Currently, Relief is concentrating its efforts on developing new treatments for respiratory disease indications. Relief holds orphan drug designations from the U.S. FDA and the European Union for the use of VIP to treat ARDS, pulmonary hypertension, and sarcoidosis. Relief also holds a patent issued in the U.S. and multiple other countries covering potential formulations of RLF-100™.

RELIEF THERAPEUTICS Holding AG is listed on the SIX Swiss Exchange under the symbol RLF and quoted in the U.S. on the OTCQB under the symbol RLFTF.

About NeuroRx, Inc.

NeuroRx draws upon more than 100 years of collective drug development experience and is led by former senior executives of Johnson & Johnson, Eli Lilly, Pfizer, and AstraZeneca, PPD. In addition to its work on RLF-100™, NeuroRx has been awarded Breakthrough Therapy Designation and a Special Protocol Agreement to develop NRX-101 in suicidal bipolar depression and is currently in Phase 3 trials. Its executive team is led by Prof. Jonathan C. Javitt, MD, MPH, who has served as a health advisor to four Presidential administrations and worked on paradigm-changing drug development projects for Merck, Allergan, Pharmacia, Pfizer, Novartis, and Mannkind, together with Robert Besthof, MIM, who served as the Global Vice President (Commercial) for Pfizer's Neuroscience and Pain Division. Its Board of Directors and Advisors includes Hon. Sherry Glied, former Assistant Secretary, U.S. Dept. of Health and Human Services; Mr. Chaim Hurvitz, former President of the Teva International Group, Lt. Gen. HR McMaster, the 23rd National Security Advisor, Wayne Pines, former Associate Commissioner of the U.S. Food and Drug Administration, Judge Abraham Sofaer, and Daniel Troy, former Chief Counsel, U.S. Food and Drug Administration.

Disclaimer: This communication expressly or implicitly contains certain forward-looking statements concerning RELIEF THERAPEUTICS Holding AG, NeuroRx, Inc. and their businesses. The results reported herein may or may not

be indicative of the results of future and larger clinical trials for RLF-100™ for the treatment of COVID-19. Such statements involve certain known and unknown risks, uncertainties and other factors, which could cause the actual results, financial condition, performance or achievements of RELIEF THERAPEUTICS Holding AG and/or NeuroRx, Inc. to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. RELIEF THERAPEUTICS Holding AG is providing this communication as of this date and does not undertake to update any forward-looking statements contained herein as a result of new information, future events or otherwise.

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