



First Heart Attack Patient Treated in European Cardioprotection Phase III trial with NeuroVive's CicloMulsion™

Investigator-initiated European multicenter trial of 1,000 acute heart attack patients will examine the ability of cyclosporine to protect cardiac tissue

Lund Sweden — April 19, 2011 — NeuroVive Pharmaceutical and Hospices Civils de Lyon (HCL) today announced the enrollment and treatment of the first patient in the European multicenter trial of myocardial infarction (the CIRCUS study). NeuroVive's advanced CicloMulsion™ cremophor-free IV cyclosporine formulation is used in this study of 1,000 patients undergoing percutaneous coronary intervention (PCI) for acute myocardial infarction to examine cyclosporine's ability to protect cardiac tissue. The double-blind, placebo-controlled, investigator-initiated study is being led by trial sponsor Professor Michel Ovize, MD, PhD, of HCL. NeuroVive is supporting the study by providing active drug, placebo and drug logistics. The study will enroll patients at 40 centers in France and additional European sites.

Professor Michel Ovize comments:

"Patients with myocardial infarction often undergo emergency percutaneous coronary intervention in which a catheter passed through the major blood vessels restores blood flow to blocked coronary arteries. Even after blood flow is restored, damage to the heart muscle continues to progress through what is known as reperfusion injury. Small-size proof-of-concept studies have shown that reperfusion injury may account for as much as 30-40% of total infarction-related myocardial damage and that timely therapeutic interventions can prevent this damage (Staat et al. *Circulation* 2005; Thibault et al. *Circulation* 2008). From a clinical point of view, it is critical to develop a drug to protect cardiac tissue during PCI and hopefully improve clinical outcome."

NeuroVive CSO Associate Professor Eskil Elmér comments:

"Professor Ovize showed previously in a study published in the *New England Journal of Medicine* (NEJM, 2008 Jul 31; 359 (5): 473-81) that cyclosporine reduces reperfusion injury by approximately 40% in patients with myocardial infarction. If, as we expect, findings are reproduced in this larger cohort of patients with significant improvement in patient outcomes, the impressive capability of cyclosporine as a cardiac tissue protective agent will be confirmed."

NeuroVive's CEO Mikael Brönnegård comments:

"If efficacy is proven, NeuroVive's CicloMulsion™, a safe formulation of cyclosporine, should become an important new treatment for heart patients and reduce morbidity and mortality after myocardial infarction. In addition, it will deliver a major reduction in the social and economic burden of heart disease and target a significant and growing global market of patients with cardiovascular disease."

About the CIRCUS study

The CIRCUS clinical trial (*does Cyclosporine ImpRove Clinical oUtcomes in ST elevation myocardial infarction patients?*) is an "investigator-initiated trial," defined as undertaken as an independent scientific research initiative by the clinical trial investigator and not at the behest of the pharmaceutical developer or industry. NeuroVive is supporting the study by providing drug and placebo. In total, about



1,000 patients will be entered in the trial. The impact of cyclosporine will be evaluated against a number of objective clinical parameters, including left ventricular function, blood markers of myocardial infarction, quantitative assessment of myocardial infarction size, and clinical status of the patient after completion of PCI. The enrollment period is planned for 18 months with a 12-month follow-up period for each patient.

About the Hospices Civils de Lyon

University Hospital of Lyon (HCL) is a public institution and the second-largest university hospital in France, with an annual budget of over 1.3 billion euros. It covers five hospital clusters in the Lyon urban area and a large number of academic research laboratories. HCL employs 20,000 people, including 2,700 physicians with the latest and most advanced technology to improve patient care not only in Lyon but also globally. HCL handles about 530 emergency cases and more than 2,300 outpatient visits daily.

HCL's capabilities include clinical trials (three clinical trial centers) and contract manufacturing for the production of pharmaceuticals and contract research. HCL has one of Europe's best-developed university structures in terms of clinical research and clinical drug trials. Responsibility for clinical research and clinical trial programs rests with the Division of Clinical Research and Innovation (DRCI). HCL has 5,000 hospital beds providing an environment conducive to conducting clinical research. Each year there are approximately 500 clinical research projects within the framework of HCL's business and up to 2009 more than 1000 clinical trials in various specialties had been performed.

About NeuroVive

NeuroVive Pharmaceutical AB is a Swedish drug development company whose primary mission is to conduct research and develop pharmaceuticals that protect nerve, cardiac and other cells undergoing health-threatening traumas or ischemia. In addition to conducting or supporting clinical trials of NeuroSTAT® — the first cyclophilin-D-inhibiting mitochondrial neuroprotectant — and CicloMulsion™, NeuroVive is researching and developing variants of cyclophilin-D-inhibiting cyclosporins and new ways of transporting these drugs across the blood–brain barrier to the central nervous system. NeuroVive's shares are listed on the Swedish trading platform AktieTorget (www.aktietorget.se). The AktieTorget market is focused on emerging, entrepreneurial businesses through an electronic trading system supplied by the OMX Nordic stock exchange in Stockholm, Sweden.

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