



21st December 2018

NPXe Announces First Patient Enrolled in Phase III trial of XENEX™ Inhaled Xenon Gas Therapy

-- Drug being evaluated for improved functional outcomes and survival rates for patients resuscitated after a cardiac arrest --

-- NPXe to receive \$5 million as recognition of milestone --

ABINGDON, UNITED KINGDOM AND BUFFALO, USA – NPXe Limited (“NPXe” or the “Company”), today confirmed enrollment of the first patient in the pivotal Phase III trial of XENEX™ (xenon gas for inhalation) for Post Cardiac Arrest Syndrome (PCAS).

The clinical study is targeting approximately 1,436 patients suffering an out-of-hospital cardiac arrest who have been successfully resuscitated, and will compare 24 hours of xenon gas treatment, in combination with targeted temperature management (TTM), and with TTM alone, which is the current standard of care. The study is expected to include about 70 study centers across the U.S. and Europe and will look for an improvement in functional outcomes and reduced mortality rates. An interim analysis of the study is expected to occur in Q4 2019 and the study to complete in 2020.

NPXe has signed a long-term distribution agreement for exclusive marketing rights to XENEX™ in North America, Japan, and Australia with Mallinckrodt plc (“Mallinckrodt”), a global business that develops, manufactures, markets and distributes specialty pharmaceutical products and therapies / a large hospital products specialist. In Europe, NPXe has a similar agreement with Linde AG (“Linde”), the large industrial gases company. Mallinckrodt will pay NPXe \$5 million as recognition of this milestone achievement per the terms of the License and Commercialisation Agreement between the parties.

PCAS is a range of complications, principally to the brain and the heart which follow the sudden loss of blood flow (ischemia) after a cardiac arrest and the subsequent reflow of blood (reperfusion) following successful resuscitation. There is no approved pharmacotherapy for neuroprotection for PCAS. There are approximately 141,000 potential cardiac arrest patients in the U.S. and 145,000 in Europe each year who may be eligible for xenon gas treatment.

The U.S. Food and Drug Administration (FDA) approved a Special Protocol Assessment¹ for the trial and the drug has been granted its Fast Track designation². NPXe expects the regulatory submission to be a drug and delivery device combination.

Matt Napoletano, COO of NPXe, commented, *“The enrollment of the first patient in this study is an important step in the development of XENEX™, and builds on our positive Phase II clinical trial which demonstrated a statistically significant reduction in brain tissue damage and a trend towards better survival outcomes³ in PCAS resulting from an Out of Hospital Cardiac Arrest.*

“We believe that if these results are repeated in a larger Phase III study in a targeted population of cardiac arrest victims that benefitted most in the Phase II trial and XENEX™ were approved by the FDA and the EMA it would become the de-facto standard of care (in combination with TTM) for PCAS treatment.”

Xenon gas for inhalation is an investigational drug, the safety and effectiveness of which have not yet been established.

About Xenon Gas for Inhalation in Post-Cardiac Arrest Syndrome (PCAS)

Xenon is a noble gas that has been used as an inhaled therapy in several studies to date. In PCAS, more N-methyl-D-aspartate receptors (NMDAR, a calcium channel found in neurons) are overactivated, causing extreme ion imbalances, neuronal damage and cell death. Studies have shown that xenon may help to inhibit the NMDAR through a unique inhibition at the glycine-binding site and can help moderate the flow of damaging ions through the calcium channel. By mitigating neuronal damage and cell death, xenon may be able to improve functional outcomes and reduce mortality rates in survivors. The FDA has not yet established the safety and effectiveness of xenon gas for inhalation for PCAS.

About NPXe

NPXe is developing xenon gas for inhalation for the treatment of Post-Cardiac Arrest Syndrome. The Company has a Special Protocol Agreement with the FDA and A Scientific Working Party Agreement with the European Medicines Agency (EMA). Both the FDA and EMA have provided the sought PCAS indication with Orphan Drug status. Orphan status prolongs the period of market exclusivity post approval. The FDA has also granted the drug Fast Track designation. Mallinckrodt has licensed the rights to market xenon gas for inhalation in North America, Australia and Japan upon approval in each country. Linde has licensed the rights to market xenon gas for inhalation in the EU, United Kingdom, Norway, Switzerland and Iceland.

CONTACTS

NPXe:

Carol Burns
Communications Director
Carol.burns.op@neuroprotexon.com
+1-716-332-7200 Ext. 155

Consilium (NPXe PR adviser):

Chris Gardner, Matthew Neal,
Lindsey Neville
neuroprotexon@consilium-comms.com
+44 (0)20 3709 5700

¹ The Special Protocol Assessment allows for an interim analysis at 50% of trial completion of the primary endpoint follow up, and if the primary and secondary endpoints are positive at that review the trial would be halted for success. If the primary or secondary endpoints are futile at that point, the trial will be stopped for futility

² The Fast Track designation is provided to drug candidates that “treat a serious condition and fill an unmet medical need.” The key benefits to recipients of a Fast Track designation include more frequent contact with the FDA on the development program and the option of Rolling Review, which allows a company to submit completed sections of the New Drug Application (NDA) for individual review by the Agency. This compares with the normal process where the entire NDA must be completed before submission. The frequency of communication under the Rolling Review better assures that questions and issues are resolved quickly, potentially leading to earlier drug approval and patient access

³ Results published in JAMA -Journal of the American Medical Association, March 2016 and Journal of the American College of Cardiology, November 2017.