



For Immediate Release

NeuroTrauma Sciences Neuroactive Compound NTS-105 Decreases Cell Death in Preclinical Model of Traumatic Brain Injury

Poster presentation at 39th Annual Symposium of the National Neurotrauma Society

ATLANTA, Ga., June 27, 2022 – NeuroTrauma Sciences, LLC (NTS), a private biopharmaceutical company developing a portfolio of disease-modifying therapeutic candidates to treat the devastating effects of stroke and traumatic brain injury (TBI), today reported data on its novel neuroactive small molecule NTS-105 in a poster presentation at the 39th Annual Symposium of the National Neurotrauma Society in Atlanta, GA. Conducted by a research team led by Barclay Morrison, III, Ph.D., Professor of Biomedical Engineering at Columbia University, New York, NY, the study demonstrated the ability of NTS-105 to reduce cell death at a wide range of concentrations in preclinical models of TBI.

NTS-105 is a novel, neuroactive steroid that crosses the blood-brain-barrier and reduces damage caused by inflammation and hypoxia. NeuroTrauma Sciences is developing NTS-105 for treating patients suffering from TBI and stroke. In this study, several concentrations of NTS-105 were compared to progesterone, which has demonstrated some promising results in TBI preclinical studies and clinical trials but did not provide statistically significant improvements in patients. As the authors discuss, progesterone can be difficult to dissolve in water making it challenging to deliver clinically. A neuroprotective steroid with improved properties, such as NTS-105, may serve as a better option.

In this study, 1nM progesterone and a wide range of NTS-105 concentrations between 0.1nM and 30nM were significantly neuroprotective. 300nM NTS-105 was not as neuroprotective as lower concentrations and like progesterone, NTS-105 may have a U-shaped dose response curve.

The poster is available on the NTS website, www.neurotraumasciences.com. An abstract also will be published online in the *Journal of Neurotrauma*.

“Our research clearly illustrates the ability of NTS-105 to decrease cell death in this *in vitro* model of TBI,” said Dr. Morrison. “These early results support continued research and development of NTS-105 for traumatic brain injury.”

“The leading cause of death and disability in children and adults aged 1 to 44, traumatic brain injury, or TBI, is responsible for nearly 64,000 deaths annually,” said D. Carl Long, Chief Executive Officer. “NeuroTrauma Sciences is dedicated to developing therapies for TBI, a field in medicine with one of the greatest unmet needs. We look forward to advancing NTS-105 into clinical trials.”

About NTS-104 / NTS-105

NTS-104 is a novel molecule that has demonstrated efficacy in preclinical models of acute TBI and ischemic stroke. NTS-104, a soluble prodrug, is readily delivered to the bloodstream where it is converted to the active neurosteroid NTS-105. NTS-105 rapidly enters the brain at concentrations sufficient to modulate key target receptors, protecting neurons from inflammation, ischemia and programmed cell death.

Columbia Engineering

Columbia Engineering, based in New York City, is one of the top engineering schools in the U.S. and one of the oldest in the nation. Also known as The Fu Foundation School of Engineering and Applied Science, the School expands knowledge and advances technology through the pioneering research of its more than 220 faculty, while educating undergraduate and graduate students in a collaborative environment to become leaders informed by a firm foundation in engineering. The School's faculty are at the center of the University's cross-disciplinary research, contributing to the Data Science Institute, Earth Institute, Zuckerman Mind Brain Behavior Institute, Precision Medicine Initiative, and the Columbia Nano Initiative. Guided by its strategic vision, "Columbia Engineering for Humanity," the School aims to translate ideas into innovations that foster a sustainable, healthy, secure, connected, and creative humanity.

About NeuroTrauma Sciences

NeuroTrauma Sciences (NTS) is a biopharmaceutical company advancing its mission to address the range of deficits caused by traumatic brain injury and stroke. These remain areas of high unmet need for millions of patients worldwide who have limited therapeutic options to alleviate the cognitive, functional, and neurobehavioral effects resulting from these insults. By following the science and leveraging our insights into the pathophysiology of the injured brain, NTS is advancing a pipeline of candidates targeting acute, subacute and chronic TBI and stroke. For additional information, please visit www.neurotraumasciences.com.

NTS is a proud sponsor of the 39th Annual Symposium of the National Neurotrauma Society.

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