NeurAegis NA101 is neuroprotective in a mouse model of Traumatic Brain Injury (TBI)

A new study indicates that the selective calpain-2 inhibitor, NA101, prevents cell death and facilitates behavioral recovery when administered after TBI.

POMONA, CALIFORNIA, UNITED STATES, July 20, 2017 /EINPresswire.com/ -- NeurAegis published the results of a series of experiments showing that NA101, the company's lead selective calpain-2 inhibitor, is neuroprotective when injected after TBI. The article, "Protection against TBI-induced neuronal death with post-treatment with a selective calpain-2 inhibitor in mice" was published online in the Journal of Neurotrauma in June 2017 ahead of print. Click here to read more: https://doi.org/10.1089/neu.2017.5024.
The study showed that calpain-1 was activated early in cortical areas surrounding the impact, within 0–8 h after TBI, while calpain-2 activation was delayed and was predominant during 8–72 h after TBI. Calpain-1 knockout enhanced cell death, while calpain-2 activity correlated with the extent of cell death, suggesting that calpain-1 activation suppresses while calpain-2 activation promotes cell death following TBI. Systemic injection(s) of a calpain-2 selective inhibitor, NA101, at 1 h or 4 h after TBI significantly reduced calpain-2 activity and cell death around the impact site, reduced the lesion volume, and promoted motor and learning function recovery after TBI. The results indicate that calpain-1 activity is neuroprotective, while calpain-2 activity is neurodegenerative after TBI, and that a selective calpain-2 inhibitor not only reduces TBI-induced cell death but also improves the recovery of neurological functions. "These results clearly demonstrate that a selective calpain-2 inhibitor has significant potential to be developed as a new therapeutic approach for limiting neuropathological damage after TBI and equivalent conditions, such as concussion and stroke" said Dr. Baudry, NeurAegis CEO. NeurAegis is now actively pursuing the preclinical development of new selective calpain-2 inhibitors through partnership with various companies.

About NeurAegis
NeurAegis (www.neuraegis.com) has been founded to translate fundamental discoveries on the mechanisms of synaptic plasticity and neuronal survival/cell death into clinical applications. These discoveries are the results of over 30 years of research by the scientific co-founders, Michel Baudry, PhD, Dean of the Graduate College of Biomedical Sciences (Western University of Health Sciences, Pomona, CA), and graduate from Ecole Polytechnique, Paris, France (X68), and Xiaoning Bi, MD, PhD, Professor, COMP (Western University of Health Sciences, Pomona, CA), directed at understanding the roles of selective biochemical cascades in both synaptic plasticity and neuroprotection/neurodegeneration. NeurAegis has identified neuroprotection as a key focus for research and development, because of the high unmet needs and tremendous research potential in this therapeutic area. Much work has been conducted to identify the mechanisms underlying neuronal death and significant progress has been made over the last 10-20 years. Nevertheless, there is still no drug on the market that provides any significant degree of neuroprotection, especially within the crucial minutes to maximum of several hours following any brain insult that results in neuronal loss.
Contact information:
Michel Baudry, CEO, NeurAegis: m.baudry@neuraegis.com

Michel Baudry

9494687310
email us here
NeurAegis