

Technology: Neuregulin

Morehouse School of Medicine (MSM) Case No.: IP-0009 and IP-0010

Issued Patents: US 7,776,817; US 7,973,007

Patent Applications: US 12/359,773; US 12/359,851; US 12/359,905; US 12/453,778; US 12/688,287; US 12/829,056; AU 2009303786; CA 2,658,326; CA 2,708,674; EP 09820929; JP 2012-511798; PCT US2010/40904

Abstract:

All therapeutic strategies for acute neurological indications deal with halting or preventing the primary damage or addressing the symptoms afterwards (e.g., tPA and atropine). These strategies do not address delayed or chronic neuronal damage after nerve agent exposure. Even if the host survives, quality of life is compromised. Neuregulin is a family of growth factors, which perform a variety of functions in the nervous system and cardiac development. Neuregulin-1 is a protein therapy for CNS injury due to nerve agent exposure, stroke, and TBI. Neuregulins have entered Phase II studies for congestive heart failure.

MSM has a dominant and expanding patent position for the use of neuregulins to treat nerve agent exposure, restenosis, stroke, and traumatic brain injury, using advanced rodent and non-human primate models of disease.

Applications:

Neuregulin-1 provides neuroprotection in ischemic stroke and neurotoxin exposure.

Value Proposition:

- Demonstrated efficacy neuroprotection and inflammation related assays – apoptosis, inflammation, etc.
- *In vivo* dose and efficacy determined and proven to treat organophosphate exposure in rodents and non-human primates.
- NIH, DoD, and CouterACT funded research team
- Late Stage CNS opportunity using Phase I data for animal rule FDA approval for nerve agent exposure treatment

***NRG-1's* reduce infarct volume 72 hours after stroke or brain trauma**



Infarcted brain tissue



NRG-1 treated brain tissue (reduction of infarction)