

Technology Offer

C3bot Peptides for the Treatment of Traumatic or Degenerative Neuronal Injury

Ref.No. 08167

Background

Peptide fragments of the C3 exoenzyme of *Clostridium botulinum* have been found to have neuritogenic effects on neurons as well as regenerative properties in an animal model (mouse). The peptides represent promising drug candidates for the treatment of neurodegenerative disorders such as Morbus Alzheimer, Parkinson, Huntington chorea but also for spinal cord injury and traumatic brain injury.

Technology

We offer neuron-specific short peptides for the treatment of neurodegenerative disorders. Whereas a 26mer peptide stimulates both, dendritic and axonal growth, a 15mer peptide selectively promotes axonal growth. Both, the 15mer and the 26mer peptide trigger a strong transient activation of RhoA which mimics the physiological conditions of RhoA activation / inactivation cycles.

These properties make the peptides suitable for repeated administration and long term treatments. As the peptides only act on neurons and not on microglia or astrocytes, there is no risk for neuronal inflammation or glia scar formation.

Benefits

- ▶ **Physiological acting neuritogenic drug – small size and effective in nanomolar concentrations**
- ▶ **Act neuron-specific – reduced risk for neuronal inflammation or glia scar formation**
- ▶ **Short peptides with low antigenicity and good kinetics**
- ▶ **Broad application areas: Spinal cord injury, traumatic brain injury, Morbus Alzheimer, Parkinson, Huntington Chorea, etc.**
- ▶ **In vivo data on spinal cord injury model show regenerative properties**

Application

Drug candidates for the treatment of neurodegenerative disorders

Suitable Industry

Pharmaceuticals

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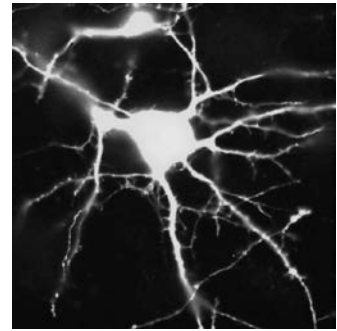


Figure : Neurocyte

Keywords

Neuron-specific peptides, drug candidate, neurodegenerative disorders, Morbus Alzheimer, Huntington chorea, spinal cord injury, traumatic brain injury

Development Stage

In vitro / in vivo

IP Rights

PCT application in 2010
National applications in USA/Europe in 2011

Patent Owner

Charité – Universitätsmedizin Berlin
Hannover Medical School

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