

## **Gliapharm Announces Research Collaboration with TRB Chemedica International**

### **In vitro study of the metabolic effect of GM1 on brain cells**

**Geneva, Switzerland, January 21<sup>st</sup> 2019**

Gliapharm and TRB Chemedica International are collaborating to better understand the metabolic effect of GM1, a natural ganglioside used to treat various neurological conditions. Through this collaboration, TRB Chemedica is using the specific expertise and proprietary technology platform of Gliapharm focused on glial cells.

#### **Scientific Background**

Gangliosides are naturally present in the plasma membrane of most vertebrate cells, particularly in the brain where they constitute up to 10% of the total lipid mass. Gangliosides play important roles in many physiological processes including cell differentiation, apoptosis, neuronal protection and neurotrophins release. TRB Chemedica has dedicated significant research resources over many years to better understand the mechanism of action of GM1 (monosialotetrahexosylganglioside) to evaluate its potential in the treatment of neurological disorders. Since the 1970s, the neurotrophic and neuroprotective properties of GM1 have been supported by cell culture, animal studies and clinical trials, demonstrating the safety and the potential role of GM1 to slow or even reverse the progression of a wide range of brain diseases such as stroke, spinal cord injury, Alzheimer's disease and Parkinson's disease.

Although the mechanisms underlying the effects of GM1 remain unclear, recent evidence indicates that GM1 could act in the brain through a type of glial cells called astrocytes. Astrocytes play a fundamental role in providing neurons with specific nutrients, which are required to satisfy their high energy demands. This metabolic support modulates neuronal activity, synaptic transmission and plasticity, hence playing a key role in the highest brain functions such as memory, cognition and behavior. This research collaboration aims at better understanding the effects of GM1 on astrocytes metabolism and its implications in neuronal function and neuroprotection.

#### **About Gliapharm**

Gliapharm is a Swiss biotechnology company that is expert in the therapeutic implications of glial cells in the brain. Gliapharm is developing innovative therapeutic solutions to treat a number of neurological diseases by targeting glial cells. Gliapharm has established a proprietary technology platform, Gliax™, to identify molecules that target glial cells. Gliapharm, which is located at the Campus Biotech in Geneva, Switzerland, is a spinoff of a leading laboratory in the field of brain metabolism and glial cell biology led by Prof. Magistretti's laboratory at EPFL (Lausanne, Switzerland).

More information about Gliapharm on [www.gliapharm.com](http://www.gliapharm.com).

### **About TRB Chemedica International**

TRB Chemedica is a market-leading pharma and biotechnology company, based in Switzerland and operating around the world. For over 30 years, TRB Chemedica has been successfully developing, producing, and promoting active pharmaceutical ingredients, pharmaceutical products, and medical devices in three specialized areas: ophthalmology, rheumatology, and neurology.

More information about TRB Chemedica on [www.trbchemedica.com](http://www.trbchemedica.com).

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