



TECHNOLOGY OFFER

UP-098: TREATMENT OF CEREBRAL ISCHEMIA (STROKE)

Key Facts

- **treatment, prevention and alleviation of an ischemic condition**
- **preventive neuroprotection of stroke**
- **decreasing the severity of an infarct**

The Technology

The GPR109A receptor located on cells of the immune system is a target for a therapy for cerebral ischemia. GPR109A agonists for the treatment of cerebral ischemia and other ischemic conditions are used to inhibit the inflammation reaction caused by an ischemic event, such as stroke.

The GPR109A agonist nicotinic acid reduced the infarct volume in a mouse model of cerebral ischemia. In addition to nicotinic acid, other GPR109A agonists are a new therapeutic strategy for the treatment of stroke. All compounds lower blood lipids and prevent atherosclerosis.

Background

Ischemic or hemorrhagic stroke occurs when a blood vessel that supplies blood to the brain is blocked by a blood clot or occurs when a blood vessel in the brain ruptures. Both lead to an undersupply of brain cells.

If blood flow is stopped for longer than a few seconds, the brain cannot get blood and oxygen. Brain cells can die, causing permanent damage. However, there is a large tissue zone, known as the penumbra, at the circumferential margin of the ischemic area which receives blood from adjoining CNS regions, and this tissue zone is a potential target for drug therapy.

The development of therapeutic agents capable of preventing or treating the disease/disorder consequences of ischemic events, whether acute or chronic, would be highly desirable. The inventors have discovered a hitherto unknown role for the high-

affinity nicotinic receptor, G-coupled receptor 109A in stroke.

Advantages

- Possible FDA priority review for new indication of established antagonist
- Treatment of acute stroke **and** prevention of future events

Commercial Opportunity

Manufacture of a pharmaceutical composition or a medicament for the treatment

Development Stage

Effective preclinical evaluation

Inventors

Markus Schwaninger, Sajjad Muhammad and Stefan Offermanns

Intellectual Property

Patent application US-Prov 61/259,062
PCT/US10/55687

Contact:

Dr. Volker Cleeves
TechnologyTransferTeam
Faculty of Medicine and Heidelberg University
Medical School
Im Neuenheimer Feld 672
69120 Heidelberg
Tel. +49-(0)6221-56-38392
Fax: +49-(0)6221-56-5714
Email: volker.cleeves@med.uni-heidelberg.de

In cooperation with:

