Neuroprotective Sodium Channel Antagonists- A Novel Treatment for Multiple Sclerosis

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Description:

Neuroprotective Sodium Channel Antagonists - A Novel Treatment for Multiple Sclerosis

Available For: Licensing and co-development

Summary

Two new series of sodium channel blockers have been identified which also have a protective effect on neuronal cells and tissues. These neuroprotective sodium channel blockers have many potential clinical applications, including treatment of neurodegeneration e.g. glaucoma, multiple sclerosis and Parkinson's disease pain and convulsions e.g. in epilepsy.

The Technology and its Advantages

Under pathological conditions, sodium channels can become abnormally activated. Sodium channel blockers are an established strategy for treating diverse conditions including pain, cardiac arrhythmia and a variety of neurological diseases, for example, epilepsy.

Unlike most other approaches, sodium channel blockade also has the potential to protect both grey and white matter from damage in a variety of neurodegenerative conditions. UCL researchers have identified two new series of sodium channel blockers that also have a powerful protective action on both white and grey matter in vitro, and thus have potential for slowing or preventing neuropathology.

Hit-to-lead investigations are underway, including in vitro tests and proof of concept in animal model investigation.

Market Opportunity

Wide-reaching clinical applications in lucrative markets include:

-Alleviating neurodegeneration, for example, in glaucoma, multiple sclerosis or Parkinson's disease - a broad market with high unmet clinical needs,

slow follow-on products and vocal and effective patient lobby groups

-Alleviating pain - market is expected to reach $2.5 billion across seven major markets by 2016

-Anticonvulsants, for example in treatment of epilepsy - recent World Health Organisation statistics estimated 50 million sufferers world wide and the market is predicted to grow to $4.3 billion by 2015

Intellectual Property Status

Patent applications covering two chemically distinct series of compounds have been filed. The first series (priority date 4th February 2000) will soon be granted in Europe (EP1252156) and the US (7790761). The latest series supported by in vivo validation in disease models (priority date 4th February 2000)is currently in PCT.

Further Information

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