Improved Small Molecule Activators Of K2p Potassium Channels

Tech ID: 32706 / UC Case 2021-189-0

TECHNOLOGY DESCRIPTION

The global chronic pain treatment market valued was $77.8 billion in 2019, and it is expected to grow at a 6.5% CAGR during the forecast period (2020–2030). In the US alone approximately 50 million individuals suffer from chronic pain with treatment and productivity costs totaling more than $500 billion each year. Despite the mortality associated with opiate use, in 2018 there were over 168 million opiate prescriptions in the US according to the Centers for Disease Control (CDC) highlighting the need for better therapies. Available therapeutics often have undesirable side effects, therefore the growing market demands safer, highly specific pharmacological solutions.

Leading UCSF scientists with significant medicinal chemistry expertise developed a series of small molecule activators of K2P potassium channels that can be used in several therapeutic contexts, not limited to pain, depression, glaucoma, ischemia-reperfusion injury, and acute respiratory distress syndrome (ARDS) with potential advantages of fewer side effects and/or superior efficacy. These compounds represent a new tool for manipulation of potassium channel function in a variety of experimental settings, as well as candidates for further drug development.

LOOKING FOR PARTNERS

To commercialize the technology for patient benefit

STAGE OF DEVELOPMENT

Pre-clinical

RELATED MATERIALS

- Science Advances 2020

DATA AVAILABILITY

Available under CDA

PATENT STATUS

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INVENTORS

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OTHER INFORMATION

KEYWORDS

therapeutics, small molecules, potassium channels, trek-1, pain, depression, glaucoma

CATEGORIZED AS

- **Medical**
  - Disease: Central Nervous System
  - Therapeutics

RELATED CASES

2021-189-0, 2013-013-0

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	9,862,684	01/09/2018	2013-013

Additional Patent Pending

RELATED TECHNOLOGIES

- Novel Small Molecule Activators of TREK-1 (K2P2.1) Potassium Channels

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- Antiviral Compounds for HIV and Other Viral Infections

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