



## **TECHNOLOGY**

# Small Molecule Inhibitors Of Kynurenine 3-Monooxygenase

## **OVERVIEW**

Kynurenic acid has neuroprotective activities in vivo while the metabolic byproduct of kynurenic acid, quinolinic acid, is neurotoxic. Kynurenine 3-monooxygenase catalyzes the conversion of kynurenine into 3-hydroxykynurenine, a precursor of neurotoxic quinolinic acid. In light the properties of kynurenic acid and quinolinic acid, pharmacological intervention directed at inhibiting quinolinic acid and/or increasing kynurenic acid is a viable therapeutic approach for treating neurological diseases and neurological manifestations of diseases. The invention relates to benzensulfonamide compounds that inhibit kynurenine 3-monooxygenase and methods of treatment using the same. (EXTENDED MARKETING SUMMARY AVAILABLE ON REQUEST)

## **APPLICATIONS**

-Novel methods of treating neurological diseases and neurological manifestations of diseases, ranging from Alzheimer's disease to diabetes -2nd generation production of kynurenine 3-monooxygenase inhibitors

## **ADVANTAGES**

-The invention relates to small molecule inhibitors of kynurenine 3- monooxygenase. Small molecules have the advantage of cell permeability, blood- brain barrier permeability, not eliciting immune responses, enhanced stability, decreased biomaterial contamination potential, and the capacity for large-scale manufacturing. -The kynurenine 3-monooxygenase inhibitors of the invention can be used to increase concentrations of neutoprotective kynurenic acid while decreasing neurotoxic quinolinic acid.

## **STAGE OF DEVELOPMENT**

Small molecule inhibitors of kynurenine 3-monooxygenase have been developed and shown to inhibit the activity of kynurenine 3-monooxygenase.

## **R&D REQUIRED**

Preclinical studies are required to provide safety and efficacy data, which will enable clinical trials to follow.

## **LICENSING POTENTIAL**

UM seeks to develop and commercialize by an exclusive or non-exclusive license agreement and/or sponsored research with a company active in the area.

## **CONTACT INFO**

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## **Additional Information**

### **INSTITUTION**

University of Maryland, Baltimore

### **PATENT STATUS**

Two issued U.S. Patents. issued US CON Patent, issued US DIV patent, issued international patents in Denmark, France, Germany, Sweden, Switzerland, United Kingdom second European Patent Application pending

### **CATEGORIES**

- Therapeutics
- Small molecules

### **INVESTIGATOR(S)**

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