

Azocino[4,5,6-cd]Indoles, Methods for Preparation and Medical Use Thereof: Simplified Synthetic Access to a New Class of 5-HT Ligands

Tech ID: 34425 / UC Case 2024-9B7-0

ABSTRACT

Researchers at the University of California, Davis have developed a novel class of compounds for modulating serotonin receptors, offering potential treatment for various psychiatric and neurological disorders without inducing hallucinogenic effects.

FULL DESCRIPTION

This technology encompasses the synthesis of novel compounds and their derivatives, through efficient photochemical routes. These compounds act as modulators of serotonin receptors, particularly the 5-HT_{2A} receptor, and offer an innovative approach to treating a wide range of neurological diseases and disorders, including depression, anxiety, PTSD, and Parkinson's disease, without the hallucinogenic side effects associated with traditional serotonergic psychedelics.

APPLICATIONS

- ▶ Pharmaceuticals targeting depression, anxiety, PTSD, Parkinson's disease, and more.
- ▶ Neurotherapeutic interventions for substance use disorder, eating disorders, and obesity.
- ▶ Research tools for studying serotonin receptors and their role in psychiatric and neurological disorders.
- ▶ Development of combination therapies with other medicinal agents for enhanced treatment efficacy.

FEATURES/BENEFITS

- ▶ Efficient synthetic routes for novel compounds.
- ▶ Potential to treat a wide range of psychiatric and neurological disorders.
- ▶ Non-hallucinogenic alternatives to classical psychedelics.
- ▶ Full activation of the 5-HT_{2A} receptor with attenuated or no hallucinogenic effects.
- ▶ Potential for use in combination with other therapeutic agents.
- ▶ Fulfills need for non-hallucinogenic serotonergic compounds.
- ▶ Solves slow onset and tapering issues associated with current psychiatric medications.
- ▶ Eliminates high abuse potential and safety concerns of classical psychedelics.

PATENT STATUS

Patent Pending

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INVENTORS

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OTHER INFORMATION

KEYWORDS

azocino[4,5,6-cd]indol-7(6H)-ones, depressive disorders, hallucinogenic effects, migraine, neurological disorders, Parkinson's disease, photocyclization, photochemistry, serotonin receptor modulators, tryptamine derivatives, tryptophan derivatives

CATEGORIZED AS

- ▶ **Biotechnology**

- ▶ Health
- ▶ **Medical**
 - ▶ Disease: Central Nervous System
 - ▶ New Chemical Entities, Drug Leads

RELATED CASES

2024-9B7-0

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- ▶ Preparation of Furan Fatty Acids from 5-(Chloromethyl) Furfural
- ▶ Synthetic, Non-Scheduled, Cannabinoid for Reducing the Frequency and Severity of Seizure
- ▶ Cannabigerol (CBG) In The Treatment Of Seizures And Epilepsy
- ▶ Process for Converting Waste Biomass
- ▶ 1-(Benzo[1,2-b:4,5-b']Difuran-4-yl)alkyl-2-amines and 1-(2,3,6,7-Tetrahydrobenzo[1,2-b:4,5-b']Difuran-4-yl)butan-2-amines as Serotonin Receptor Modulators for Neurodegenerative Disorders

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