

Isotryptamine Tetracycles for Treating Brain Disorders

Tech ID: 34845 / UC Case 2023-593-0

ABSTRACT

Researchers at the University of California, Davis have developed a technology for the treatment of neuropsychiatric and neurological diseases with compounds that enhance neural plasticity without the hallucinogenic effects.

FULL DESCRIPTION

This technology introduces novel compounds, and their pharmaceutically acceptable salts, designed to increase neural plasticity and dendritic spine density, thereby offering therapeutic benefits for neuropsychiatric and neurological diseases. These compounds have shown to rectify structural changes in the brain associated with such diseases, including the loss of dendritic spines and synapses, while minimizing hallucinogenic effects.

APPLICATIONS

- ▶ Pharmaceutical treatments for depression, anxiety, addiction, and other neuropsychiatric disorders.
- ▶ Therapeutic interventions for neurological conditions with altered neural architecture.
- ▶ Research tools in neurobiology and psychopharmacology.

FEATURES/BENEFITS

- ▶ Enhances neural plasticity and dendritic spine density.
- ▶ Non-hallucinogenic, making it suitable for a broader patient population.
- ▶ May treat a wide range of neuropsychiatric and neurological diseases.
- ▶ Improved physicochemical properties for better clinical utility.
- ▶ Potential for antidepressant, anxiolytic, and anti-addictive effects.
- ▶ Treats neuropsychiatric and neurological diseases related to altered synaptic connectivity and plasticity.
- ▶ Expands clinical utility of hallucinogenic psychoplastogens by overcoming their subjective effects.
- ▶ Provides treatments that do not exacerbate conditions like schizophrenia.

PATENT STATUS

Country	Type	Number	Dated	Case
Patent Cooperation Treaty	Published Application	WO 2025/080609	04/17/2025	2023-593

Additional Patents Pending

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INVENTORS

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OTHER INFORMATION

KEYWORDS

isotryptamine,
antidepressant, anti-
addictive, anxiolytic,
dendritic spine density,
neural plasticity,
neurological diseases,
non-hallucinogenic,
psychoplastogens,
neuropsychiatric
treatment, synaptic
connectivity

CATEGORIZED AS

- ▶ [Biotechnology](#)
- ▶ [Health](#)

- ▶ **Medical**
 - ▶ Disease: Central Nervous System
 - ▶ New Chemical Entities, Drug Leads
 - ▶ Research Tools
 - ▶ Therapeutics
- ▶ **Research Tools**
 - ▶ Bioinformatics

RELATED CASES

2023-593-0

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- ▶ Novel Psychoplastogenic Tropanes for Treating Brain Disorders
- ▶ Combinations of Psychoplastogens and DYRK1A Inhibitors
- ▶ Iboga Entactogens
- ▶ dimerLight
- ▶ GPCR Screening Method to Identify Non-Hallucinogenic Compounds
- ▶ Psychoplastogens For Treating Hearing-Related Disorders

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