國家衛生研究院
National Health Research Institutes

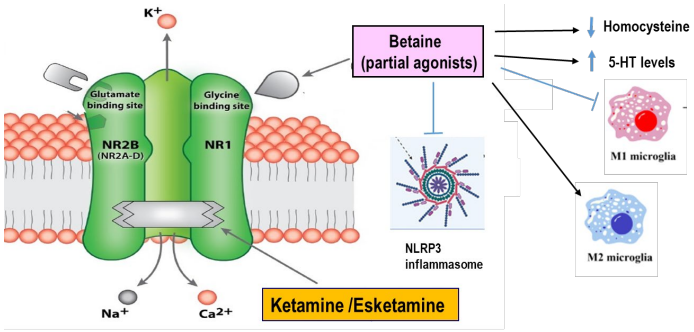
A novel method to enhance the efficacy and safety of ketamine in treating neuropsychiatric disorders

Invention Description

The present invention relates to a method for enhancing the antidepressant effect of ketamine while reducing its psychotomimetic side effects and abuse potential, achieved through the combination with betaine.

Mechanism of action (MOA)

Betaine exhibits antidepressant, anti-inflammatory, and antioxidant effects, and functions as a partial agonist at the glycine modulatory site of the N-methyl-D-aspartate (NMDA) receptor.



Preclinical efficacy

Enhancing
-antidepressant effect
-analgesic effect
Reducing
-reinforcing efficacy
-motor incoordination
-cognitive impairment
-prepulse inhibition deficits

Patent granted

Taiwan
Japan
USA
Canada
Israel
Europe Expiration
2038-01-01

Beta-K (Betaine/Ketamine)

Take-at-home treatment

Higher efficacy for depression and pain

Lower risk for psychotomimetic side effect, abuse potential and cognitive deficits

Potential indications for neuropsychiatric disorders

Depression

Bipolar disorder

Anxiety

Post-traumatic stress disorder

Obsessive-Compulsive Disorder

Substance use disorder

Other potential indications and usage

Prevention of Ischemia-reperfusion injury from organ transplantation

Treatment of levodopa-induced dyskinesia

Treatment of Status Epilepticus

Treatment of Amyotrophic Lateral Sclerosis

Treatment of Fibromyalgia

Treatment of Complex Regional Pain Syndrome

Treatment of Rett Syndrome