

COMPOUND TO TREAT ALCOHOL USE DISORDER

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Technology Description

Researchers at Washington University in St. Louis have developed new compounds that may be used to treat alcohol use disorder (AUD). AUD, a common condition that takes a high personal and public health toll, is characterized by severe problems with drinking- sufferers may compulsively use alcohol and may lose control over their alcohol intake. Medications to ease withdrawal and craving symptoms are greatly needed, but only a few exist. The most commonly used therapeutic is a medication that targets the same receptors as ethanol itself, the GABA-A and NMDA receptors. This medication, however, is not optimal as it has weak clinical and pharmacological efficacy. Thus, there is a great need for new therapeutics to treat AUD. To help meet this need the inventors have synthesized novel dual receptor-targeted neurosteroids. These compounds target both GABA-A and NMDA receptors with high potency and strong selectivity. The compounds may serve not only as more effective therapeutics for AUD, but also may be used to treat depression and anxiety. This technology provides more potent compounds that may enable more effective treatment of AUD.

Stage of Research

Validation studies are ongoing.

Applications

- Treatment of alcohol use disorder
- Treatment of anxiety and depression

Key Advantages

- Compounds serve as both NMDA receptor antagonists and GABA-A receptor potentiators
- New generation of drugs- potential to address not only AUD, but also associated mental health challenges (e.g. addiction, dependency and depression) through the compounds' additional anti-depressant activity
- Enhanced potency and efficacy as compared to existing therapeutics
- Potential to more effectively treat alcohol use disorder

Patents

- Patent application has been filed

Related Web Links

[Dr. Covey profile](#)

Dr. Mennerick [profile](#) and [lab](#)