

Researchers find anti-seizure drug may reduce alcohol consumption

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Researchers from Boston University School of Medicine (BUSM) have discovered that the anti-seizure drug ezogabine, reduced alcohol consumption in an experimental model. The findings, reported in the *American Journal of Drug and Alcohol Abuse*, may lead to more effective treatments for alcoholism.

Excessive consumption of [alcohol](#) is one of the leading causes of illness and death in the U.S. and has significant negative economic impact by limiting the productivity of workers and necessitating huge [health care expenditures](#).

According to the researchers, this study provides the first evidence that alcoholism can be treated by this newly discovered mechanism that helps to regulate brain activity known as Kv7 channel modulation. "This finding is of importance because ezogabine acts by opening a particular type of potassium channel in the brain, called the Kv7 channel, which regulates activity in areas of the brain that are believed to regulate the rewarding effects of alcohol," explained lead author Clifford Knapp, PhD, associate professor of psychiatry at BUSM. "This research indicates that drugs that open Kv7 channels might be of value in the treatment of alcoholism," he added.

Previous studies conducted by this research group helped to establish the value of anti-seizure drugs as medications to treat alcoholism. However, further research needs to be conducted to establish that the effects of this drug result primarily from its actions on Kv7 channels. "Because of

the close proximity of the doses at which ezogabine reduces drinking and those at which it is reported to produce motor impairment, it is still important to continue to investigate how selective the actions of ezogabine are on the neuronal mechanisms that control [alcohol consumption](#)," said Knapp.

The researchers believe these finding will encourage the search for other drugs that act on this system to discover more effective treatments for alcoholism.

Provided by Boston University Medical Center

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