



Transforming treatment options for alcohol use disorder

Barbara Mason, PhD

Pearson Family Chair
Director, Pearson Center for Alcohol and Addiction Research
Professor, Department of Molecular Medicine
Scripps Research

ABOUT THE LECTURE

Alcohol use disorder (AUD)—characterized by an impaired ability to stop or control alcohol use, despite adverse consequences—affects nearly 30 million Americans. In her talk, Professor Barbara Mason explained that AUD is a complicated neural disorder that impacts multiple regions of the brain. She discussed how she and her colleagues are identifying and developing effective treatments for AUD, specifically highlighting therapeutics that target the stress pathways driving relapse in early recovery.

TOP TAKEAWAY POINTS

1. Repeated alcohol misuse leads to lasting changes in the brain, making people dependent and prone to relapse. Unlike other substances of abuse, alcohol does not bind to just one receptor in the brain—it **impacts multiple different pathways and circuits**, which has historically made it difficult to develop targeted medicines to treat AUD.
2. Understanding the complicated neurobiology of AUD can help guide the development of novel, safe and effective treatments. **There are currently three FDA-approved treatments for AUD**, but they are not widely used and do have certain drawbacks and patient compliance issues.
3. Mason and her colleagues at The Scripps Research Institute-Alcohol Research Center (TSRI-ARC) and the Pearson Center for Alcohol and Addiction Research are targeting the different brain stress systems that drive the negative emotional states of early abstinence, such as anxiety, sleep disturbances and dysphoria. They take a unique, “Rosetta-Stone” approach that combines preclinical and clinical research, **helping ensure that only the most promising drug candidates make it to later-stage, expensive trials**.
4. Mason’s lab is specifically **translating the basic research findings made at TSRI-ARC to help identify and clinically evaluate potential medicines**. Mason and her team test these promising small molecules using two different types of phase two clinical studies.
5. Mason has published promising results for multiple drug candidates, including for gabapentin, mifepristone and apremilast. These clinical studies showed reduced drinking relative to placebo and reduced cravings, all while being safe and well tolerated. **These medicines that return the brain’s stress systems back to homeostasis offer an innovative approach to treating AUD**.

