Cody A. Siciliano, Ph.D.
Vanderbilt University, Department of Pharmacology, Vanderbilt Center for Addiction Research

2017 BBRF Young Investigator

Dr. Cody Siciliano is an Assistant Professor in the Department of Pharmacology at Vanderbilt University. He received his bachelor’s degree in psychology from Binghamton University in 2011 and his Ph.D. in neuroscience at Wake Forest School of Medicine in 2015 followed by postdoctoral training at the Massachusetts Institute of Technology.

The Siciliano Lab, part of the Vanderbilt Center for Addiction Research, investigates circuits and receptors in the brain that control decision making, and how their function is altered in neuropsychiatric disorders. Disrupted decision-making processes are a hallmark of many disorders, such as depression and addiction. The Siciliano Lab seeks to understand how experiences can cause these deficits to occur, and how to intervene.

A major focus of Dr. Siciliano’s work has been to determine the neurobiological factors that produce vulnerability or resilience to drug and alcohol addiction. This work has led to the development of several new approaches for quantifying and studying drug taking and addiction behaviors. Dr. Siciliano has identified neural activity patterns that can predict which individuals are likely to eventually develop compulsive alcohol drinking behaviors—well before the behaviors actually emerge. Targeting the receptors and circuits driving these activity patterns may aid in the prevention and treatment of substance-use disorders.

“My BBRF-funded work has formed the basis of virtually all the ongoing projects in my lab. We are now investigating the cellular and circuit basis of vulnerability and resilience to alcohol-use disorder, cocaine-use disorder, and post-traumatic stress disorder. Approaches developed with BBRF support have opened new avenues of research outside of my group as well, as these approaches have begun to be utilized by other labs in field.”