

Emma Johnson, Ph.D.



Dr. Emma Johnson is a Faculty Instructor in Psychiatry at Washington University School of Medicine in St. Louis, Missouri. She received her Ph.D. in 2017 from the University of Colorado Boulder, under the supervision of Dr. Matthew Keller at the Institute for Behavioral Genetics, where her dissertation work used genome-wide methods to test hypotheses about the evolutionary history of complex traits. Emma then completed a postdoctoral research position with Dr. Arpana Agrawal at WUSM. As a postdoc, she was supported by an F32 from NIAAA; this funded work on the shared and unique genetics of schizophrenia and alcohol use disorder received one of the World Congress on Psychiatric Genetics' Early Career Investigators Program oral presentation awards in 2019. She continues to act as one of the lead analysts for the

Psychiatric Genomic Consortium's Substance Use Disorders working group, a position she has held since the start of her postdoc. Emma and the PGC SUD, in collaboration with iPSYCH and deCODE Genetics, recently published the largest genome-wide association study to date of cannabis use disorder in *The Lancet Psychiatry*. Emma is also a co-investigator in the Collaborative Study on the Genetics of Alcoholism, publishing multiple papers on the genetics of cannabis use and alcohol use disorders as part of COGA. In addition to funding support for her work through NIAAA (and a pending K01 awaiting funding decisions from NIDA), Emma is also funded as PI by the American Foundation for Suicide Prevention and the Brain & Behavior Research Foundation. Her current research interests center around understanding the genetic and biological bases of substance use and psychiatric comorbidities; to achieve these aims, she is particularly interested in integrating multi-modal sources of data (transcriptomics and epigenetic data, model organism data) and employing causal inference models using genetically informed designs.