

# Emma C Johnson, PhD

## Research Assistant Professor

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## Education

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### PhD, Psychology - Behavioral, Psychiatric, and Statistical Genetics

University of Colorado Boulder Aug 2017  
Boulder, CO  
*Mentor:* Matthew Keller, Ph.D.

*Dissertation:* “The genetic etiology of schizophrenia and other complex traits: novel insights from existing genome-wide datasets”

### MA, Psychology - Behavioral, Psychiatric, and Statistical Genetics

University of Colorado Boulder April 2016  
Boulder, CO

### BSPH, Biostatistics

### BA, Biology

University of North Carolina at Chapel Hill May 2013  
Chapel Hill, NC

## Positions

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### Research Assistant Professor

Department of Psychiatry Mar 2022 - current  
Washington University School of Medicine  
St. Louis, MO

### Instructor

Department of Psychiatry Dec 2020 – Mar 2022  
Washington University School of Medicine  
St. Louis, MO

### Postdoctoral Research Associate

Department of Psychiatry Sept 2017 - Dec 2020  
Washington University School of Medicine  
St. Louis, MO

*Mentor:* Arpana Agrawal, Ph.D.

*Research Foci:* Genetics of substance use disorders; genetic overlap and sources of comorbidity amongst substance use disorders and other psychiatric conditions

## Grant Support

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### Active

#### **NIDA K01DA051759**

4/1/21 - 3/31/26

“Identifying genetic sources of comorbidity between cannabis and schizophrenia using genome-wide and integrative omics data”

Role: PI

Cannabis involvement is heritable and is more common in those with psychosis-related behaviors and schizophrenia, but the contributions to this comorbidity remain unclear. This K01 application aims to better understand the specific variants, genes, and biological pathways that underlie these behaviors, incorporate multi-omics data from human and rodent studies to prioritize variants for functional follow-up studies, and examine whether polygenic risk for comorbid cannabis use disorder and schizophrenia predicts psychosis-related behaviors in population-based and/or high-risk samples.

#### **BBRF Young Investigator Grant**

1/15/21 - 1/14/23

“The Impact of Prenatal Cannabis Exposure on Placental Epigenetics – Implications for Newborn Brain and Socio-Emotional Development”

Role: PI

This young investigator grant proposal seeks to supplement an ongoing study of marijuana use among pregnant mothers by evaluating associations between marijuana use during pregnancy, placental epigenetic signatures, and psychiatrically-relevant child outcomes. This multimodal project adopts highly innovative and integrative approaches that traverse levels of analysis (i.e., epigenetic signatures in placental tissue, newborn/infant MRI and cognitive and emotion assessment) to inform our understanding of the interactive molecular, neural, and behavioral mechanisms underlying prenatal marijuana exposure and psychopathology risk.

### Past

#### **NIAAA F32AA027435**

12/1/18 - 11/30/20

“Identifying Contributions to the Genetic Correlation Between Alcohol Use Disorders and Schizophrenia”

Role: PI

This fellowship proposes intensive training in bioinformatics and cutting-edge statistical genetics methods via workshops and hands-on mentoring, with the goal of better understanding the genetic influences underlying the common comorbidity of alcohol dependence and schizophrenia.

**AFSP Young Investigator Innovation Grant**

11/1/19 - 10/31/21

“Elucidating the Polygenic Architecture Underlying Suicidal Thoughts and Behaviors”

Role: PI

This grant aims to elucidate the genetic etiology of suicidal thoughts and behaviors, their polygenic overlap with death by suicide, depression, risk-taking, and cognitive vulnerability, and to examine the role of individual liability for problematic drinking and familial risk for alcoholism, over and above family history of suicide, in the development of suicidal thoughts and behaviors.

**Awards and Honors**

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2021	NIDA-NIAAA Early Career Investigator Showcase awardee
2019	Early Career Investigator Program - Oral Presentation Award winner ( <i>WCPG meeting 2019</i> )
2019	Early Career Investigator Program - Travel Award ( <i>WCPG meeting 2019</i> )
2019	RSA Memorial Award ( <i>RSA meeting 2019</i> )
2019	Junior Investigator Travel Award ( <i>RSA meeting 2019</i> )
2018	Travel Award – Pathway to Drugs meeting ( <i>Copenhagen, DK</i> )
2017	Reviewer’s Choice Abstract ( <i>ASHG 2017 Meeting</i> )
2016	Graduate School Domestic Travel Grant ( <i>CU Boulder</i> )
2015	Behavior Genetics Association Travel Award
2012	Summer Undergraduate Research Fellowship ( <i>UNC Chapel Hill</i> )
2009-2013	Irving Jacob Reuter Award of The Community Foundation of Western North Carolina ( <i>Full scholarship for undergraduate education</i> )

**Invited Talks**

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May 2021: “Genetics of substance use and related traits: insights, complexities, and challenges”, presented at the Institute for Behavioral Genetics mini-conference (*virtual keynote due to COVID-19 circumstances*)

April 2020: “Using a variety of genome-wide methods to investigate the shared genetic underpinnings of alcohol use disorder and schizophrenia”, presented at the Center for Studies on Addiction 2019-2020 seminar series at the University of Pennsylvania. (*virtual seminar due to COVID-19 circumstances*)

**Publications (46)**

Impact Factor (IF) provided where available

# Indicates paper where I served as mentor

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Lai D, **Johnson EC**, Colbert SMC, et al. Evaluating risk for alcohol use disorder: polygenic risk scores and family history. *Alcoholism: Clinical and Experimental Research* (in press) IF = 3.24

# Paul SE, ... **Johnson EC**. Associations between cognition and polygenic liability to substance involvement in middle childhood: Results from the ABCD Study. *Drug and Alcohol Dependence* (2021)

<https://doi.org/10.1016/j.drugalcdep.2022.109277> IF = 4.49

Huggett SB, **Johnson EC**, et al. Genes identified in rodent studies of alcohol intake are enriched for heritability of human substance use. *Alcoholism: Clinical and Experimental Research* (2021) <https://doi.org/10.1111/acer.14738> IF = 3.24

Hatoum, A.S., **Johnson, E.C.**, Colbert, S.M.C. et al. The addiction risk factor: A unitary genetic vulnerability characterizes substance use disorders and their associations with common correlates. *Neuropsychopharmacology* (2021). <https://doi.org/10.1038/s41386-021-01209-w> IF = 6.75

# Colbert SMC, ... **Johnson EC**. Exploring the genetic overlap of suicide-related behaviors and substance use disorders. *AJMG Part B: Neuropsychiatric Genetics* (2021) <https://doi.org/10.1002/ajmg.b.32880> IF = 3.39

Colbert SMC, Funkhouser SA, **Johnson EC**, Hoeffler CA, Ehringer MA, Evans LM. Differential shared genetic influences on anxiety with problematic alcohol use compared to alcohol consumption. *AJMG Part B: Neuropsychiatric Genetics* (2021) <https://doi.org/10.1002/ajmg.b.32874> IF = 3.39

Kapoor M, Chao M, **Johnson EC**, et al. Multi-omics integration analysis identifies novel genes for alcoholism with potential link to neurodegenerative diseases. *Nature Communications* 12, 5071 (2021). <https://doi.org/10.1038/s41467-021-25392-y> IF = 14.92

Karcher NR, Paul SE, **Johnson EC**, et al. Psychotic-like experiences and polygenic liability in the ABCD Study. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging* (2021) <https://doi.org/10.1016/j.bpsc.2021.06.012> IF = 5.34

**Johnson EC**, et al. Investigation of convergent and divergent genetic influences underlying schizophrenia and alcohol use disorder. *Psychological Medicine* (2021) <https://doi.org/10.1017/S003329172100266X> IF = 5.81

Hatoum AS, **Johnson EC**, Agrawal A, Bogdan R. Brain Structure and Problematic Alcohol Use: A Genetic Quasi-Experimental Test of Plausible Causation. *Brain Imaging & Behavior* (2021) <https://doi.org/10.1007/s11682-021-00482-z>

Hatoum AS, et al. [middle author] Genetic Liability to Cannabis Use Disorder and COVID-19 Hospitalization. *Biological Psychiatry: Global Open Science* (2021) <https://doi.org/10.1016/j.bpsgos.2021.06.005>

Hatoum AS, **Johnson EC**, et al. Polygenic Risk Scores for Alcohol Involvement Relate to Brain Structure in Substance-Naive Children: Results from the ABCD Study. *Genes, Brain and Behavior* 2021; 20:e12756. <https://doi.org/10.1111/gbb.12756> IF = 3.40

Sherva R, et al. [middle author] Genome-wide association study of phenotypes measuring progression from first cocaine or opioid use to dependence reveals novel risk genes. *Exploration of medicine*. (2021) <https://doi.org/10.37349/emed.2021.00032>

**Johnson EC**, Aliev F, et al. Associations Between Suicidal Thoughts and Behaviors and Genetic Liability for Cognitive Performance, Depression, and Risk-taking in a High-risk Sample. *Complex Psychiatry* (in press).

Palmer RHC, **Johnson EC**, Won H, Polimanti R, et al. Integration of Evidence across Human and Model Organism Studies: A Meeting Report. *Genes, Brain and Behavior*. 2021; 20:e12738. <https://doi.org/10.1111/gbb.12738> IF = 3.40

Bountress, K., et al. [middle author] Potential Causal Effect of PTSD on AUD and Alcohol Consumption: A Mendelian Randomization Study. *Alcoholism: Clinical and Experimental Research*, 45, 1616– 1623 <https://doi.org/10.1111/acer.14649> IF = 3.24

**Johnson EC**, Hatoum AS, et al. The relationship between cannabis and schizophrenia: a genetically informed perspective. *Addiction* (2021). <https://doi.org/10.1111/add.15534> IF = 6.34

Baumeister SE, Baurecht H, .... **Johnson EC**, Hung RJ. Cannabis use, pulmonary function, and lung cancer susceptibility: A Mendelian randomization study. *Journal of Thoracic Oncology* (2021) <https://doi.org/10.1016/j.jtho.2021.03.025> IF = 13.36

Deak JD, **Johnson EC**. Genetics of substance use disorders: A review. *Psychological Medicine* (2021). <https://doi.org/10.1017/S0033291721000969> IF = 5.81

Linnér RK, Mallard TT, et al. **[middle author]** Multivariate genomic analysis of 1.5 million people identifies genes related to addiction, antisocial behavior, and health. *Nature Neuroscience* (accepted). IF = 20.07

Mallard TT, Savage JE, **Johnson EC**, et al. Item-level genome-wide association study of the Alcohol Use Disorders Identification Test in three population-based cohorts. *American Journal of Psychiatry* (accepted). IF = 13.66

**Johnson EC\***, Demontis, D\*, Thorgeirsson TE\*, et al. A large-scale genome-wide association study meta-analysis of cannabis use disorder. *The Lancet Psychiatry* (2020). (\*joint first authorship) [https://doi.org/10.1016/S2215-0366\(20\)30339-4](https://doi.org/10.1016/S2215-0366(20)30339-4) IF = 16.21

Meyers J, Chorlian D, Bigdeli T, **Johnson EC**, et al., The Association of Polygenic Risk for Schizophrenia, Bipolar Disorder, and Depression with Neural Connectivity in Adolescents and Young Adults: Examining Developmental and Sex Differences. *Translational Psychiatry*. (2020) IF = 5.18

Paul SE, Hatoum AS, Fine JD, **Johnson EC**, et al. Associations Between Prenatal Cannabis Exposure and Childhood Outcomes: Results from the ABCD Study. *JAMA Psychiatry* (2020). <https://doi:10.1001/jamapsychiatry.2020.2902> IF = 17.47

Reynolds, T., **Johnson EC**, Huggett, S.B. et al. Interpretation of psychiatric genome-wide association studies with multispecies heterogeneous functional genomic data integration. *Neuropsychopharmacology* (2020). <https://doi.org/10.1038/s41386-020-00795-5> IF = 6.75

Barr PB, Ksinan A, Su J, **Johnson EC**, et al. Using polygenic scores for identifying individuals at increased risk of substance use disorders in clinical and population samples. *Translational Psychiatry* (2020). <https://doi.org/10.1038/s41398-020-00865-8> IF = 5.18

Zhou H, et al. **[middle author of 26]** Meta-analysis of problematic alcohol use in 435,563 individuals identifies 29 risk variants and yields insights into biology, pleiotropy and causality. *Nature Neuroscience* (2020) <https://doi.org/10.1038/s41593-020-0643-5> IF = 20.07

**Johnson EC**, Chang Y, Agrawal A. An Update on the Role of Common Genetic Variation Underlying Substance Use Disorders. *Current Genetic Medicine Reports* (2020). <https://doi.org/10.1007/s40142-020-00184-w>

Polimanti R, Walters RK, **Johnson EC**, et al. Leveraging genome-wide data to investigate differences between opioid use vs. opioid dependence in 41,176 individuals from the Psychiatric Genomics Consortium. *Molecular Psychiatry* (2020). <https://doi.org/10.1038/s41380-020-0677-9> IF = 12.38

Munn-Chernoff M, **Johnson EC**, et al. Shared Genetic Risk between Eating Disorder- and Substance-Use-Related Phenotypes: Evidence from Genome-Wide Association Studies. *Addiction Biology* (2020). <https://doi.org/10.1111/adb.12880> IF = 5.93

Cox JW, Sherva RM, Lunetta KL, **Johnson EC**, et al. Genome-Wide Association Study of Opioid Cessation. *J. Clinical Medicine*. <https://doi.org/10.3390/jcm9010180> IF = 1.88

**Johnson EC\***, Sanchez-Roige S\*, et al. Polygenic contributions to alcohol use and alcohol use disorders across population-based and clinically ascertained samples. (\*joint first authorship) *Psychological Medicine*. (2020) <https://doi.org/10.1017/S0033291719004045> IF = 5.81

Evans LM, **Johnson EC**, Melroy-Grief WE, et al. The role of a *priori*-identified addiction and smoking gene sets in smoking behaviors. *Nicotine & Tobacco Research*. <https://doi.org/10.1093/ntr/ntaa006> IF = 3.79

Meyers JL, Chorlian DB, **Johnson EC**, et al. Association of Polygenic Liability for Alcohol Dependence and EEG Connectivity in Adolescence and Young Adulthood. *Brain Sciences*. <https://doi.org/10.3390/brainsci9100280> IF = 3.33

Salvatore JE, et al. **[middle author]** Sibling Comparisons Elucidate the Associations between Educational Attainment Polygenic Scores and Alcohol, Nicotine, and Cannabis. *Addiction*. <https://doi.org/10.1111/add.14815> IF = 6.34

Border R, **Johnson EC**, Evans LM, Keller MC (2019) Measurement error cannot account for failed replications of historic candidate gene-by-environment hypotheses: Response to Vrshek-Schallhorn et al. *American Journal of Psychiatry*. <https://doi.org/10.1176/appi.ajp.2019.19040374r> IF = 13.66

Lai D, Wetherill L, Kapoor M, **Johnson EC**, et al. (2019) Genome-wide association studies of the self-rating effects of ethanol (SRE). *Addiction Biology*. <https://doi.org/10.1111/adb.12800> IF = 5.93

Wetherill L, Lai D, **Johnson EC**, et al. (2019) Genome-wide association study identifies loci associated with liability to alcohol and drug dependence that is associated with variability in reward-related ventral striatum activity in African- and European-Americans. *Genes, Brain and Behavior*. <https://doi.org/10.1111/gbb.12580> IF = 3.40

Meyers JL, Salvatore JE, Aliev F., **Johnson EC**, et al. (2019) Psychosocial moderation of polygenic risk for cannabis involvement: The role of trauma exposure and frequency of religious service attendance. *Translational Psychiatry*. [10.1038/s41398-019-0598-z](https://doi.org/10.1038/s41398-019-0598-z) IF = 5.18

**Johnson EC**, St. Pierre C.L., Meyers J., et al. (2019) The genetic relationship between alcohol consumption and aspects of problem drinking. *Alcoholism: Clinical and Experimental Research*. <https://doi.org/10.1111/acer.14064> IF = 3.24

Border R, **Johnson EC**, Evans LM, Smolen A, Berley N, Sullivan PF, Keller MC. (2019) No support for historic candidate gene or candidate gene-by-interaction hypotheses for major depression across multiple large samples. *American Journal of Psychiatry*. <https://doi.org/10.1176/appi.ajp.2018.18070881> IF = 13.66

**Johnson EC**, Tillman R, Aliev F, et al. (2018) Exploring the relationship between polygenic risk for cannabis use, peer cannabis use, and the longitudinal course of cannabis involvement. *Addiction*. <https://doi.org/10.1111/add.14512> IF = 6.34

Walters RK, Polimanti R, **Johnson EC**, et al. (2018) Transancestral GWAS of alcohol dependence reveals common genetic underpinnings with psychiatric disorders. *Nature Neuroscience*. <https://doi.org/10.1038/s41593-018-0275-1> IF = 20.07

**Johnson EC**, Evans LM, Keller MC. (2018) Relationships between estimated autozygosity and complex traits in the UK Biobank. *PLOS Genetics*. <https://doi.org/10.1371/journal.pgen.1007556> IF = 5.11

**Johnson EC**, Border R, Melroy-Greif W, De Leeuw CA, Ehringer MA, Keller MC. (2017) No evidence that schizophrenia candidate genes are more associated with schizophrenia than non-candidate genes. *Biological Psychiatry*. <http://dx.doi.org/10.1016/j.biopsych.2017.06.033> (\*see commentary on this paper: <https://doi.org/10.1016/j.biopsych.2017.09.004>) IF = 12.10

**Johnson EC**, Bjelland DW, Howrigan DP, et al. (2016) No Reliable Association Between Runs of Homozygosity and Schizophrenia in a Well-Powered Replication Study. *PLoS Genetics*. <https://doi.org/10.1371/journal.pgen.1006343> IF = 5.11

## Preprints and in prep (4)

# indicates paper where I am mentor

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# Colbert SMC, Keller MC, Agrawal A, **Johnson EC**. Exploring the relationships between autozygosity, educational attainment, and cognitive ability in a contemporary, trans-ancestral American sample. (*under review at Behavior Genetics*.) Preprint: <https://doi.org/10.1101/2021.11.24.469902>

# Colbert SMC, **Johnson EC**. Decreased autozygosity over generational time: comparisons of a trend across the US and the UK. *In preparation*.

**Johnson EC**, Colbert SMC, et al. Associations between polygenic liability for schizophrenia and cannabis-induced experiences. *In preparation*.

Colbert SMC, Norton S, **Johnson EC**, Bogdan R, Agrawal A. Genetic contribution of C-Reactive Protein to the relationship between cannabis and diseases with inflammatory signatures. *In preparation*.

## Book Chapters

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Colbert SMC, **Johnson EC**. Genetic explanations for the association between cannabis and schizophrenia. (*in review*; 2021). In D'Souza D., Castle D., and Murray R. (Eds.), *Marijuana and Madness, 3<sup>rd</sup> Ed*. Cambridge, England: Cambridge University Press.

## Selected Oral Presentations

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**Johnson EC** (December 2021) *Shared Genetic Influences Underlying Cannabis Use disorder, Psychosis-Like Experiences, and Schizophrenia*. Presented as part of a panel on "Cannabis and Psychosis: Clinical features, Risk for Relapse and Potential Mechanism" at the ACNP 2021 meeting (San Juan, Puerto Rico)

**Johnson EC** (January 2021) *The relationships between cannabis, tobacco, and schizophrenia: a genetically informed perspective*. Presented at the NIDA-NIAAA Mini-Convention: Early Career Investigator Showcase (virtual meeting)

**Johnson EC** (January 2020) *Measures of consumption versus disordered substance use: evidence of different genetic architectures*. Presented at the NIDA Genetics and Epigenetics Cross-Cutting Research Team Meeting (Rockville, MD)

**Johnson EC**, ... Agrawal A. (October 2019) *Genome-wide cross-disorder analyses of schizophrenia and alcohol use disorder in more than 350,000 individuals reveals schizophrenia's genetic overlap with disordered drinking but not drinks per week*. Presented at the XXVII World Congress of Psychiatric Genetics meeting. (Anaheim, CA) \*Early Career Investigator Program Oral Presentation Award winner

**Johnson EC**, ... Agrawal A. (October 2019) *Genome-wide association study of cannabis use disorder: results from European and trans-ancestral meta-analyses*. Presented at the XXVII World Congress of Psychiatric Genetics meeting. (Anaheim, CA)

**Johnson EC**, Sanchez-Roige S, Agrawal A, Clarke T-K, Edwards AC. (September 2019) *Polygenic contributions to alcohol use and alcohol use disorders across population-based and clinically ascertained samples*. Presented at the 17<sup>th</sup> European Society for Biomedical Research on Alcoholism Meeting. (Lille, France)

**Johnson EC**, Bigdeli TB, Fanous A, ... Gelernter J, Edenberg HE, Agrawal A. (June 2019) *Investigating the genetic overlap of alcohol use disorders and schizophrenia*. Presented at the Research Society on Alcoholism 42<sup>nd</sup> Annual Scientific Meeting. (Minneapolis, MN)

**Johnson EC**, Melroy-Greif W, Border R, De Leeuw CA, Ehringer, MA, Keller MC (May 2016). *Examining 25 classic schizophrenia candidate genes in the context of GWAS data - evidence for relevance?* Presented at the Institute for Behavioral Genetics Annual Mini-conference.

**Johnson EC**, Bjelland D, Keller MC (June 2015). *Runs of homozygosity in the PGC2 data – no reliable association with schizophrenia*. Presented at the 45<sup>th</sup> Annual Behavioral Genetics Association Meeting (San Diego, CA)

## Selected Poster Presentations

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**Johnson EC**, Meyers J,... Agrawal, A. (October 2020). *Associations Between Suicidal Thoughts and Behaviors and Genetic Liability for Cognitive Performance, Depression, and Risk-taking in a High-risk Sample*. Presented at the World Congress of Psychiatric Genetics (virtual).

**Johnson EC**, Tillman R, Aliev F,... Agrawal, A. (October 2018). *Exploring the relationship between polygenic risk for cannabis use, peer cannabis use, and the longitudinal course of cannabis involvement*. Presented at the World Congress of Psychiatric Genetics (Glasgow, Scotland).

**Johnson EC**, Keller MC (October 2017). *A broad survey of the relationship between autozygosity and fitness-related and sociodemographic traits in the UK Biobank*. Presented at the American Society of Human Genetics Meeting. (Orlando, FL) \*Reviewer's Choice Abstract - scored in top 10% of poster abstracts

**Johnson EC**, Melroy-Greif W, Border R, De Leeuw C, Ehringer, MA, Keller MC (October 2016). *No evidence that the most studied candidate genes for schizophrenia are more relevant to schizophrenia than random sets of genes*. Presented at the American Society of Human Genetics Meeting. (Vancouver, B.C.)

**Johnson EC**, Bjelland D, Keller MC (October 2015). *Runs of homozygosity in the PGC2 data – no reliable association with schizophrenia*. Presented at the XXIII<sup>rd</sup> World Congress of Psychiatric Genetics. (Toronto, CA)

**Johnson EC**, Robinson D (November 2012). *Lasting consequences of binge drinking: effect of adolescent alcohol exposure on autoshaping in rats*. Presented at State of North Carolina Undergraduate Research and Creativity Symposium.

## Membership in Professional and Academic Organizations

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2018-present	Research Society on Alcoholism
2016-present	American Society of Human Genetics, Behavioral Genetics Association
2013	Carolina Research Scholars

## Professional Development

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May 2019	<i>NIDA Addiction Genetics and Epigenetics "Data Jamboree"</i> Oak Ridge National Laboratory
Mar. 2015	<i>The 2015 International Workshop on Statistical Genetic Methods for Human Complex Traits</i> Institute for Behavioral Genetics, Boulder, CO
Aug. 2012	SAS Certified Clinical Trials Programmer
May 2012-Aug. 2012	Summer Programming Intern, Biogen Idec, Inc. Research Triangle Park, North Carolina <i>Mentor</i> : Christopher Kania, M.A.



## Teaching Experience

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### Workshops

Washington University in St. Louis

- Summer 2018                      Interface of Psychology, Neuroscience, and Genetics Workshop  
Teaching Assistant for Drs. Arpana Agrawal and Ryan Bogdan

### Graduate Courses

Washington University in St. Louis

- Fall 2018 - 2020                      GEMS 5483 - Human Genetic Analysis  
Guest Lecturer

University of Colorado Boulder

- Fall 2016                                PSYC 5541 - Special Topics: R Programming Course  
Co-Teaching Assistant for Dr. Matthew Keller

### Undergraduate Courses

Washington University in St. Louis

- Fall 2019 - 2021                      PSYC 345 - Genes, Environment, and Human Behavior  
Instructor (co-taught with Dr. Arpana Agrawal in Fall 2019 and 2020)

University of Colorado Boulder

- Spring 2014                            PSYC 2606 - Social Psychology  
Teaching Assistant for Dr. Brett King
- Fall 2013                                PSYC 3101 - Statistics and Research Methods in Psychology  
Teaching Assistant for Dr. Matthew Jones; taught two lab sections

## Service

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- 2021 -                                      Member, BGA IDEA Task Force
- 2021                                        Member, planning committee for PGC Day at WCPG 2021
- 2020                                        Consultant, Sarah Paul's NRSA F31 proposal "Trajectories of Alcohol Involvement from Middle Childhood to Early Adulthood: A Multimodal Investigation"
- 2019 -                                        Representative on the PGC Data Receiving Committee for the PGC SUD group
- 2019                                        Member, Lindsay Michalski's dissertation committee
- 2017 -                                        Ad Hoc Reviewer - Biological Psychiatry; American Journal of Psychiatry; Psychological Medicine; American Journal of Medical Genetics Part B: Neuropsychiatric Genetics; Schizophrenia Bulletin; Journal of Abnormal Psychology; Addiction; Molecular Psychiatry; Behavior Genetics; Journal of Child Psychology and Psychiatry; ACER; Addictive Behaviors; Frontiers: Neurology; Genes, Brain, and Behavior; Human Molecular Genetics
- 2016                                        Member, IBG Annual Mini-Conference coordinating committee

## Methods & Skills

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- R (skilled), Python (proficient), Excel (proficient), command line text editing (emacs, awk/sed, etc; proficient)
- Experienced at working in a Unix/Linux environment and working on remote computing clusters
- Competent at handling large and complex datasets (e.g., imputed genome-wide datasets with 10 million+ genetic variants for 300,000+ individuals)
- Skilled at using typical statistical genetic software (Plink, GCTA, Genomic SEM, PRS-CS, etc.)
- Expertise with a variety of behavioral and statistical genetics methodology including: genome-wide association studies, genomic structural equation models, estimates of autozygosity and other population genetics approaches, causal inference models, polygenic risk score analyses, longitudinal analyses (e.g., latent growth curve models)

## References

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Arpana Agrawal, Ph.D. (*Postdoctoral mentor*)  
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