

SCOTT IAN VRIEZE

Department of Psychology & Neuroscience
Institute for Behavioral Genetics
University of Colorado Boulder
1480 30th Street, Boulder, CO 80301
scott.vrieze@colorado.edu • (303) 492-1743

EDUCATION

Ph.D. Psychology – University of Minnesota	2012
Advisors: William Grove; Matt McGue	
M.A. Psychology – University of Minnesota	2009
B.A. Psychology & Philosophy – University of Minnesota	2004

POSITIONS

Assistant Professor of Psychology and Neuroscience	2014-
Faculty Fellow, Institute for Behavioral Genetics	2014-
University of Colorado Boulder Boulder, CO	
Research Investigator	2013-2014
Department of Biostatistics University of Michigan Ann Arbor, MI	
Research Fellow	2012-2013
Mentor: Gonalo Abecasis, DPhil Department of Biostatistics University of Michigan Ann Arbor, MI	
Psychology Intern	2011-2012
Minneapolis Veterans Administration Health Care System Minneapolis, MN	

STUDENTS AND FELLOWS

Stephanie Zellers, PhD student , Psychology & Neuroscience B.A. (2016), Oberlin College	2016-
Maia Frieser, PhD student , Psychology & Neuroscience MPH (2013), University of Michigan	2014-
Zhen Liu, PhD student , Psychology & Neuroscience BS (2014), University of Michigan	2014-
David Brazel, PhD student , Molecular, Cellular and Developmental Biology BA (2012), Colby College	2014-

SERVICE

Society for Research in Psychopathology Local Host for 2017 annual meeting in Denver	October 2017
Institute for Behavioral Genetics, University of Colorado Boulder Faculty Media Liaison Faculty Search Committee – member	2015- 2014-2015
Department of Psychology & Neuroscience, University of Colorado Boulder Faculty Search Committee – member Curriculum for Undergraduate Education – member Human Research Committee – member	2015- 2015- 2014-
BioFrontiers Institute, University of Colorado Boulder Next Generation Sequencing Facility Advisory Committee – member	2014-

FUNDING

CURRENT

09/2014 – 08/2017	Social Media, Online Measures, and Substance Use Development in Adolescent Twins Role: Principal Investigator NIAAA: R01 AA 023974 Award: \$1,150,000 DC
05/2015 – 04/2020	Genetic Association Meta-Analyses of Smoking and Drinking for the Sequencing Age Role: Principal Investigator NIDA: R01 DA 037904A1 Award: \$1,950,000 DC
10/2015 – 9/2017	Methods to Unveil the Genetic Architecture of Nicotine Dependence via NGS data Role: PI of subcontract (PI: Liu) NIDA: R21DA040177 Award: \$275,000 DC
10/2015 – 9/2020	ABCD-USA Consortium: Twin Research Project Role: Co-I (PIs: Iacono, Barch, Luciana, Heath, Madden, Neale, Bjork, Banich, Hewitt) NIDA: U01DA041120 Award: \$13,200,000 Total Costs

Last Updated March 25 2016

06/2016 – 05/2020 **Sequence Data & Genetic Architecture: New Genetic Association Meta-Analysis Methods**
 Role: PI of Subcontract (PI: Liu)
 NHGRI R01HG008983
 Award: 1,200,000 Total Costs

SUBMITTED

09/2016 – 08/2021 **Impact of Marijuana Legalization: Comparison of Two Longitudinal Twin Cohorts**
 (PI: Vrieze/Hopfer/McGue; Contact PI: Hopfer)
 Submitted to: National Institute on Drug Abuse
 Role: PI in multi-PI plan
 Total Funds Requested: \$7,500,000

COMPLETED

07/2013 – 06/2015 **Delineating Gene, Environment, & Development Interplay in Substance Use Disorders** (PI: Hicks)
 Role: Co-Investigator
 NIDA: R01 DA 034606
 Award: \$750,000 DC

09/2007 – 08/2009 **Incremental Validity of Various Measures in Predicting Sex Offense Recidivism** (PI: Grove)
 Funder: University of Minnesota
 Role: Co-Investigator
 Award: \$15,000

PEER-REVIEWED PUBLICATIONS

1. Chang LC, Li B, Fang Z, **Vrieze SI**, McGue M, Iacono WG, Tseng GC, Chen W (in press). A computational method for genotype calling of family-based sequencing data. *BMC Bioinformatics*.
2. Vaidyanathan U, **Vrieze SI**, Iacono WG (2015). The Art of Smart Science: Weaving Theory and Risky Study Design into the DSM and RDoC. *Psychological Inquiry*, 26, 286-292.
3. Vaidyanathan U, **Vrieze SI**, Iacono WG (2015). The Power of Theory, Research Design, and Transdisciplinary Integration in Moving Psychopathology Forward. *Psychological Inquiry*, 26, 209-230.
4. Pistis G, Porcu E, **Vrieze SI**, Sidore C, Steri M, Danjou F, Busonero F, Mulas A, Zoledziowska M, Maschio A, Brennan C, Lai S, Miller MB, Marcelli M, Urru MF, Pitzalis M, Lyons RH, Kang HM, Jones CM, Angius A, Iacono WG, Schlessinger D, McGue M, Cucca F, Abecasis GR, & Sanna S. (2015). Rare variant genotype imputation with thousands of study-specific whole-genome sequences: Implications for cost-effective study designs. *European Journal of Human Genetics*, 23, 975-983.
5. Iacono WG, Vaidyanathan U, **Vrieze SI** & Malone SM. (2014). Knowns and unknowns for psychophysiological endophenotypes: Integration and response to commentaries. *Psychophysiology*, 51, 1339-1347.
6. Iacono WG, Malone SM, Vaidyanathan, U, & **Vrieze SI** (2014). Genome-wide scans of genetic variants for psychophysiological endophenotypes: A methodological overview. *Psychophysiology*, 51, 1207-1224.
7. **Vrieze SI**, Malone SM, Pankratz N, Vaidyanathan U, Miller MB, Kang HM, McGue M, Abecasis GR & Iacono WG (2014). Genetic associations of nonsynonymous exonic variants with psychophysiological endophenotypes. *Psychophysiology*, 51, 1300-1308.

8. **Vrieze SI**, Malone SM, Vaidyanathan U, Kwong A, Kang HM, Zhan X, Flickinger M, Irons D, Jun G, Locke AE, Levy S, Myers RM, Oetting WS, McGue M, Abecasis GR and Iacono WG (2014). In search of rare variants: Preliminary results from whole genome sequencing of 1325 individuals with psychophysiological endophenotypes. *Psychophysiology*, 51, 1309-1320.
9. **Vrieze SI**, Vaidyanathan U, Hicks BM, Iacono WG, & McGue M. (2014). Personality Disconstraint's Role in the Development of Nicotine, Marijuana, and Alcohol Dependence in Young Adulthood. *Behavior Genetics*, 1, 14-24.
10. Irons D, Iacono WG, Oetting W, Kirkpatrick R, **Vrieze SI**, Miller MB, McGue M. (2014). GABA system genes – no evidence for a role in alcohol use and abuse in a community-based sample. *Alcoholism: Clinical and Experimental Research*, 38(4), 938-947.
11. **Vrieze SI**, Feng S, Miller MB, Hicks BM, Pankratz N, Abecasis GR, Iacono WG, McGue M. (2014). Rare Non-Synonymous Exonic Variants in Addiction and Behavioral Disinhibition. *Biological Psychiatry*, 75(10), 783-789.
12. **Vrieze SI**, Docherty A, Thuras P, Arbisi PA, Iacono WG, Sponheim S, Erbes CR, Siegel W, & Leskela J (2013). The electronic medical record is an invaluable clinical tool. Let's start using it. *Psychiatric Services*, 64, 946-949.
13. McGue M, Zhang Y, Miller MB, Basu S, **Vrieze SI**, Hicks B, Malone S, Oetting WS, & Iacono WG (2013). A genome-wide association study of behavioral disinhibition. *Behavior Genetics*, 43, 363-373.
14. **Vrieze SI**, McGue M, Miller MB, Hicks BM & Iacono WG (2013). Three Mutually Informative Ways to Understand the Genetic Relationships among Behavioral Disinhibition, Alcohol Use, Drug Use, Nicotine Use, and Their Co-occurrence: Twin Biometry, GCTA, and Genome-wide Scoring. *Behavior Genetics*, 43, 97-107
15. **Vrieze SI**, McGue M, & Iacono WG (2012). Confluence of genes, environment, development, and behavior in a post-GWAS world. *Development and Psychopathology*, 24, 1195-1214.
16. **Vrieze SI**, Hicks BM, Iacono WG, & McGue M (2012). Decline in Genetic Influence on the Co-Occurrence of Alcohol, Marijuana, and Nicotine Dependence Symptoms from Age 14 to 29. *American Journal of Psychiatry*, 169, 1073-1081.
17. **Vrieze SI** (2012). Model selection and psychological theory: A discussion of the differences between the Akaike Information Criterion (AIC) and the Bayesian Information Criterion (BIC). *Psychological Methods*, 17, 228-243.
18. **Vrieze SI**, McGue M, & Iacono WG (2012). The interplay of genes and adolescent development in substance use disorders: Leveraging findings from GWAS meta-analyses to test developmental hypotheses about nicotine consumption. *Human Genetics*, 131, 791-801.
19. **Vrieze SI**, Perlman G, Krueger RF, & Iacono WG (2012). Is the continuity of externalizing psychopathology the same in adolescents and middle-aged adults? A test of the externalizing spectrum's developmental coherence. *Journal of Abnormal Child Psychology* 40, 459-470.
20. **Vrieze SI**, McGue M, Miller MB, Legrand L, Schork NJ, & Iacono WG (2011). An assessment of the individual and collective effects of variants on height using twins and a developmentally informative study design. *PLoS Genetics*, 7.
21. **Vrieze SI** & Grove WM (2010). Multidimensional assessment of criminal recidivism: Problems, pitfalls, and proposed solutions. *Psychological Assessment*, 22, 382-395.
22. **Vrieze SI** & Grove WM (2009). Survey on the use of clinical and mechanical prediction methods in clinical psychology. *Professional Psychology: Research and Practice*, 40, 525-531.
23. Grove WM & **Vrieze SI** (2009). An exploration of the base rate scores of the Millon Clinical Multiaxial Inventory-III. *Psychological Assessment*, 21, 56-57.
24. **Vrieze SI**, & Grove WM (2008). Predicting Sex Offender Recidivism. I. Correcting for item overselection and accuracy overestimation in scale development. II. Sampling error-induced attenuation of predictive validity over base rate information. *Law and Human Behavior*, 32, 266-278.

BOOK CHAPTERS

- Grove WM & **Vrieze SI** (2013). The Clinical versus Mechanical Prediction Controversy. In Geisinger KF, Bracken BA, Carlson JF, Hansen JI, Kuncel, NR, Reise SP, Rodriguez MC (Eds). *APA handbook of testing and assessment in psychology*, Vol. 2: Testing and assessment in clinical and counseling psychology (pp. 51-62). Washington DC: American Psychological Association.
- Grove WM & **Vrieze SI** (2012). Taxometrics: Conceptual and applied aspects. In HM Cooper (Ed.), *APA Handbook of Research Methods in Psychology*. Washington, D.C.: American Psychological Association.
- Grove WM & **Vrieze SI** (2010). On the substantive grounding and clinical utility of categories versus dimensions. In Millon T, Krueger RF, & Simonsen E (Eds.), *Contemporary Directions in Psychopathology: Toward DSM-V and ICD-11*. New York: Guilford Press.

INVITED PRESENTATIONS

- Vrieze SI** (2016, May). Genes for Good: An Online Framework for Behavioral Genetic Research at Scale. Invited paper in the Rising Stars of Clinical Science symposium at the annual meeting of the Association for Psychological Science in Chicago, IL.
- Vrieze SI** (2015, Nov). Genetic Association Studies in Addiction and Psychopathology: Meta-analysis, Endophenotypes, and Biobanks. Invited seminar in the Department of Biostatistics and Informatics, University of Colorado School of Public Health.
- Vrieze SI** (2015, July). New Gene Discovery Efforts in Addiction Genetics. Invited presentation at deCODE Genetics, Reykjavik Iceland.
- Vrieze SI**, on behalf of Genes for Good (2015, May). Online assessments, wireless monitoring, and social media to engage large-scale cohort participation: Genes for Good as an example. Invited presentation at the annual meeting of the Association for Research in Vision and Ophthalmology.
- Vrieze SI**, on behalf of the GSCAN Consortium (2014, Feb). Preliminary Results from the GWAS and Sequencing Consortium of Alcohol and Nicotine use (GSCAN). Invited presentation at the pre-conference genetics network meeting of the Society for Research on Nicotine and Tobacco in Boston MA.

SELECTED CONFERENCE PRESENTATIONS

- Vrieze SI**, on behalf of the GSCAN Consortium (2014, Feb). Rare Variants and Cigarette Smoking: Results from the GWAS and Sequencing Consortium of Alcohol and Nicotine use. Paper presented at the annual meeting of the Society for Research on Nicotine and Tobacco.
- Vrieze SI**, Feng S, Zhan X, Miller MB, Jun G, Wing MK, Tan A, Bragg-Gresham J, Flickinger M, Locke A, Kang HM, Levy S, Myers RM, Boehnke M, Iacono WG, McGue M, Abecasis GR (2013, October). Testing genetic associations with addiction phenotypes using moderate-depth whole genome sequencing. Platform Presentation at the Annual Meeting of the American Society of Human Genetics.
- Vrieze SI**, Feng S, Miller MB, Hicks BM, Pankratz N, Abecasis GR, Iacono WG, McGue M (2013, July). Role of Non-Synonymous Exonic Variants in Addiction and Behavioral Disinhibition. Paper presented at the annual meeting of the Behavior Genetics Association.
- Vrieze SI**, on behalf of the EMADS Consortium (2013, March). The Exome Meta-Analysis of Drinking and Smoking (EMADS). Invited presentation at a pre-conference workshop of the Society for Research on Nicotine and Tobacco.
- Feng S, **Vrieze SI**, Tarrier B, Bragg-Gresham J, Zhan X, Sidore C, McGue M, Iacono WG, & Abecasis GR. (2012, November). Design of Sequencing Studies in Family Samples with Application to The Study of Substance Use Disorders. Poster presented at the annual meeting of the American Society of Human Genetics.
- Vrieze SI**, Feng S, Miller MB, Pankratz N, Iacono WG, McGue M & Abecasis GR (2012, October). The role of the exome in substance use disorders: A test of rare functional variants. Poster presented at the annual meeting of the Society for Research in Psychopathology.
- Vrieze SI**, Iacono WG, & McGue M. (2012, June). Genome-wide Scoring to Predict Substance Use Pathology. Paper presented at the annual meeting of the Behavior Genetics Association.

- Vaidyanathan U; Malone S, **Vrieze SI**, Miller MB, Burwell S, McGue M, & Iacono WG (2012, June). The Heritability of the Startle Blink Reflex: A Twin Study. Paper presented at the annual meeting of the Behavior Genetics Association.
- Perlman G, Nelson L, **Vrieze SI**, Malone S, Iacono WG, & McGue M (2012, June). Multivariate, Multi-Method Model of P300 Amplitude and Externalizing Psychopathology: Evidence for a Highly Heritable Combination. Paper presented at the annual meeting of the Behavior Genetics Association.
- Vrieze SI**, Hicks BM, Iacono WG, & McGue M (2011, June). Longitudinal Change in Comorbidity of Substance Use Disorders. Paper presented at the annual meeting of the Behavior Genetics Association.
- McGue M, Miller MB, Basu S, Eskin E, Hicks B, Irons D, Keyes M, Legrand L, Li X, Malone S, Oetting W, Samek D, Schork N, Sul JH, **Vrieze SI**, Iacono WG (2011, June). A Genome-wide Association Study (GWAS) of Behavioral Disinhibition. Paper presented at the annual meeting of the Behavior Genetics Association.
- Vrieze SI**, Nelson L, Malone S, Iacono WG, & McGue M (2010, October). Modeling the Interface between P3 Amplitude and Externalizing Psychopathology: A Multi-trait, Multi-method Factor Analysis. Poster presented at the annual meeting of The Society for Research in Psychopathology.
- Vrieze SI** (2009, January). Use of Actuarial Tests in Predicting Sex Offense Recidivism Among Sexually Violent Persons. Training Presentation to Psychological Services at Minnesota State Court's 4th District.

CLINICAL EXPERIENCE

Clinical Psychology Internship (APA & PCSAS accredited)

Veterans Administration Medical Center – Minneapolis, MN 2011–2012

Major Rotations: Post-traumatic Stress Recovery
General Psychiatry
Serious and Persistent Mental Illness
Psychoanalytic-informed Therapy

Practicum (All in Minneapolis, MN)

Midwestern Neuropsychology (Neuropsychology)	2009–2011
Hennepin County Medical Center (Trauma Center Neuropsychology)	2009
Walk-in Counseling Center (Crisis Counseling)	2008–2010
Fraser Child and Family Center (Child Assessment & Therapy)	2008–2009
Hennepin County Mental Health Center (Assessment & Family Therapy)	2007–2008
University of Minnesota Program in Human Sexuality	2006–2009

AWARDS & HONORS

Thompson Award

2012

For outstanding presentation by an Associate Member at the 42nd Annual Meeting of the Behavior Genetics Association.

National Institute on Mental Health Trainee

09/2009-08/2011

Neurobehavioral Aspects of Personality and Psychopathology

T32 MH 017069 (PI: Luciana, University of Minnesota)

TEACHING

University of Colorado Boulder

Behavioral Genetics II (PSYC 3112), undergraduate	Spring 2015, 2016
Statistical Genetics (PSYC 7102), graduate	Fall 2015
Personality Measurement (PSYC 7693), graduate, core clinical course	Spring 2016

University of Minnesota, Twin Cities

Teaching Assistant - Clinical Assessment (PhD sequence)	2008-2011
Supervised clinical PhD students in assessment	

Co-Instructor - Clinical Assessment (PhD sequence) Topic: classical and modern test theory	2009-2010
Instructor - Introduction to Clinical Psychology	2009
Instructor - Forensic Psychology	2008
Laboratory Instructor - Research Methods	2007-2008
Teaching Assistant - Introduction to Clinical Psychology	2007-2008
Teaching Assistant - Introduction to Abnormal Psychology	2006-2007

PROFESSIONAL MEMBERSHIPS

Behavior Genetics Association	2010-
American Society of Human Genetics	2011-
Association for Psychological Science	2012-
Society for Research in Psychopathology	2012-
Society for Research on Nicotine and Tobacco	2013-2014

EDITORIAL ACTIVITY AND GRANT REVIEW SERVICE

Study Section

Jun 11 2014 AA-3 (NIAAA) *ad hoc* review

Editorial Board

2013- *Journal of Abnormal Child Psychology*

Ad hoc Review

Addiction

Alcoholism: Clinical and Experimental Research

Behavior Genetics

Biological Psychiatry

Development & Psychopathology

Drug and Alcohol Dependence

Human Genetics

Journal of Abnormal Child Psychology

Journal of Personality and Social Psychology

JAMA Psychiatry

Nature Neuroscience

Psychometrika