

# Jared V. Balbona

COMPLEX TRAIT GENETICS · WITHIN-FAMILY DESIGNS · METHODS DEVELOPMENT

Institute for Behavioral Genetics, University of Colorado Boulder, 447 UCB Boulder, CO 80309-0447

✉ jared.v.balbona@gmail.com | 🐦 @JaredBalbona | 🎓 Jared V. Balbona

## Education & Research Experience

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### Postdoctoral Associate

2022 - Present

UNIVERSITY OF COLORADO BOULDER | INSTITUTE FOR BEHAVIORAL GENETICS

- Supervised by Matthew C. Keller

### Doctor of Philosophy in Behavioral, Psychiatric, and Statistical Genetics

2018 - 2022

UNIVERSITY OF COLORADO BOULDER | DEPT. OF PSYCHOLOGY & NEUROSCIENCE

- Advised by Matthew C. Keller

### Master of Arts in Behavioral, Psychiatric, and Statistical Genetics

2018 - 2021

UNIVERSITY OF COLORADO BOULDER | DEPT. OF PSYCHOLOGY & NEUROSCIENCE

- Advised by Matthew C. Keller

### Bachelor of Arts in Cognitive Neuroscience

2014 - 2018

WASHINGTON UNIVERSITY IN ST. LOUIS | DEPT. OF PSYCHOLOGICAL & BRAIN SCIENCES

- Thomas H. Eliot Scholar
- Graduated with High Distinction
- Advised by:
  - Ryan Bogdan (2017-2018)
  - Deanna Barch (2016-2017)
  - Lori Markson (2015-2017)

## Publications

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1. **Balbona JV**, Kim Y, & Keller MC (*in press.*) The Estimation of Environmental and Genetic Parental Influences. *Development and Psychopathology*.
2. Howe LJ, et al. (2022) Within-sibship GWAS improve estimates of direct genetic effects. *Nature Genetics*.
3. **Balbona JV**, Kim Y, & Keller MC (2021) Estimation of parental effects using polygenic scores. *Behavior Genetics*.
4. Kim Y, **Balbona JV**, & Keller MC (2021) Bias and precision of parameter estimates from models using polygenic scores to estimate environmental and genetic parental influences. *Behavior Genetics*
5. Bondy E, Baranger DA, **Balbona JV**, Sputo K, Paul SE, Oltmanns T, & Bogdan R (2021) Neuroticism and reward-related ventral striatum activity: Probing vulnerability to stress-related depression. *Journal of Abnormal Psychology*.
6. Hwang HG, Suh J, **Balbona JV**, Sodhi S, & Markson L (2020) The crude ostracism detection system: Pupils react to minimal cues of exclusion. *Journal of Social and Personal Relationships*.
7. **Balbona JV**, Hariri A, & Bogdan R (2018) Neuroticism Potentiates the Effects of Early Life Stress on Depressive Symptoms and Reward-Related Ventral Striatum Reactivity (Undergraduate Thesis). *Washington University in St. Louis Undergraduate Research Digest*.

## Invited Talks

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1. Presenter at the Norwegian Institute of Public Health's Centre for Fertility and Health (Oslo, Norway; September 2022)
2. Panelist and Presenter at the National Centre for Research Methods' (NCRM) Annual MethodsCon (Manchester, UK; September 2022)
3. Presenter at the University of Bristol MRC Integrative Epidemiology Unit (Bristol, UK; September 2022)
4. Faculty instructor and Tutor at the International Statistical Genetics Workshop (Virtual; May 2022)
5. Instructor at the World Congress of Psychiatric Genetics (WCPG) Conference (Virtual; September 2021)
6. Presenter at The Collaborative Study on Genetics of Alcoholism (COGA) meeting, (Virtual; December 2020)
7. Presenter at University of Bristol Within-Family Research Group meeting (Virtual; October 2020)

## Honors & Awards

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## Fulker Award

June 2022

BEHAVIOR GENETICS ASSOCIATION (BGA)

- Awarded best article published in *Behavior Genetics*, 2021

## Carol Lynch Award

February 2022

INSTITUTE FOR BEHAVIORAL GENETICS (IBG)

- Institutional award for the best IBG graduate student publication, 2021

## Thompson Award

June 2020

BEHAVIOR GENETICS ASSOCIATION (BGA)

- Awarded best oral presentation at the 2020 BGA Conference

## National Institute of Mental Health Trainee

July 2019 - June 2022

NIMH T32MH016880 | PI: JOHN HEWITT | INSTITUTE FOR BEHAVIORAL GENETICS

- Selected three times (the maximum number eligible) by faculty training committee

## Journal Reviews

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I have completed reviews for the following journals (# indicating multiple reviews):

1. *Journal of Child Psychology and Psychiatry* (2)
2. *Intelligence*
3. *Development and Psychopathology*

## Conference Presentations

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1. **Balbona JV**, Kim Y, & Keller MC (2022). Using genomic data to examine the causes and consequences of assortative mating. Oral Presentation at the 2022 Institute for Behavioral Genetics Mini-Conference, Boulder, CO.
2. **Balbona JV**, Kim Y, & Keller MC (2021). Bivariate Estimation of Vertical Transmission and Genetic Nurture using Polygenic Scores. Poster Presented at the 2021 Institute for Behavioral Genetics Poster Day, Boulder, CO.
3. **Balbona JV**, Kim Y, & Keller MC (2021). Multivariate Estimation of Vertical Transmission and Genetic Nurture using Polygenic Scores. Oral Presentation at the Behavior Genetics Association 51st Annual Conference, Conducted Virtually
4. **Balbona JV**, Kim Y, & Keller MC (2021). Multivariate Estimation of Vertical Transmission and Genetic Nurture using Polygenic Scores. Oral Presentation at the 2021 Institute for Behavioral Genetics Mini-Conference, Boulder, CO.
5. **Balbona JV**, Kim Y, & Keller MC (2020). Estimation of Parental Effects Using Polygenic Scores. Poster Presented at the 2020 Institute for Behavioral Genetics Poster Day, Boulder, CO.
6. **Balbona JV**, Kim Y, & Keller MC (2020). The Nature of Nurture Revisited: Estimating the Effect of Vertical Transmission using Structural Equation Modeling. Oral Presentation at the Behavior Genetics Association 50th Annual Conference, Conducted Virtually
7. **Balbona JV**, Border RS, Evans LM, & Keller MC (2019). Does Maternal Smoking During Pregnancy Moderate the Effect of Genes on Offspring Smoking Behavior? Poster Presented at the 2019 Institute for Behavioral Genetics Poster Day, Boulder, CO.
8. **Balbona JV** & Keller MC (2019). Heritability Estimation Methods for Complex Human Traits. Oral Presentation at the 2019 Institute for Behavioral Genetics Mini-Conference, Boulder, CO.
9. **Balbona JV**, Hariri A, & Bogdan R (2018). Neuroticism Potentiates the Effects of Early Life Stress on Depressive Symptoms and Reward-Related Ventral Striatum Reactivity. Poster Presented at the Washington University Spring Undergraduate Research Symposium, St. Louis, MO.
10. **Balbona JV**, Hariri A, & Bogdan R (2017). Neuroticism as a Moderator of the Depressogenic Effects of Stress: Examining the Role of Neural Reward Processing and Genomic Risk. Poster Presented at the 2017 Washington University Global Inequality Conference, St. Louis, MO.
11. **Balbona JV**, Hariri A, & Bogdan R (2017). Neuroticism as a Moderator of the Depressogenic Effects of Stress: Neural Reward Processing and Genomic Risk. Poster Presented at the Washington University Fall Undergraduate Research Symposium, St. Louis, MO.
12. Hwang HG, **Balbona JV**, Suh J, & Markson L (2017). Pupil Reactivity to Social Exclusion: A Window into the Mechanism Behind Social Exclusion Detection. Poster Presented at the Association for Psychological Science (APS) 29th Annual Conference in Boston, MA.
13. **Balbona JV**, Hwang HG, Suh J, & Markson L (2017). Pupil Reactivity to Social Exclusion: A Window into the Mechanism Behind Social Exclusion Detection. Oral Presentation at the Twenty-Sixth UCLA Psychology Undergraduate Research Conference (PURC), Los Angeles, CA.
14. **Balbona JV**, Hwang HG, Suh J, & Markson L (2016). Pupillometric Response to Implicit Social Exclusion. Poster Presented at the Washington University Fall Undergraduate Research Symposium, St. Louis, MO.

15. **Balbona JV**, Hwang HG, & Markson L (2016). Pupillometric Changes to Third Person Social Exclusion. Poster Presented at the Washington University Mind, Brain, and Behavior Program Poster Session, St. Louis, MO.

## Teaching Experience

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### **Research Methods in Psychology (Undergraduate Course)**

Spring 2019

UNIVERSITY OF COLORADO BOULDER

- Teaching Assistant
- Led twice weekly lab sections

### **Research Methods in Psychology (Undergraduate Course)**

Fall 2018

UNIVERSITY OF COLORADO BOULDER

- Teaching Assistant
- Led twice weekly lab sections

### **Biological Pathways to Psychopathology: From Genes and the Environment to Brain and Behavior (Combined Graduate and Undergraduate Course)**

Spring 2018

WASHINGTON UNIVERSITY IN ST. LOUIS

- Teaching Assistant
- Guest Lecture: *The Role of GABRA2 in the Development of Alcohol Abuse Disorders*

### **Introduction to Psychology (Undergraduate Course)**

Spring 2017

WASHINGTON UNIVERSITY IN ST. LOUIS

- Teaching Assistant