

LUKAS SCHAFFER – DOCTORAL STUDENT

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2636 Hawthorne Pl,
Boulder, CO 80304

EDUCATION

PhD Student	2023-Present
University of Colorado Boulder Clinical Psychology Certificate in Behavioral, Psychiatric, & Statistical Genetics Current GPA: 4.00 Advisor: Andrew Grotzinger, PhD	
Bachelor of Science	2017-2021
University of Pittsburgh Biological Science & Psychology Minor in Chemistry Cumulative GPA: 3.75 Advisor: Anna Marsland, PhD, RN	

HONORS AND AWARDS

Outstanding Associate Member Oral Presentation Award	2024
54 th Annual Meeting of the Behavior Genetics Association, London, UK	
Postbaccalaureate Intramural Research Training Award	2021
National Institute of Mental Health	
Honors in Major - Psychology	2021
Honors Thesis: “Investigating Personality Traits as Moderators of Inflammatory and Autonomic Responses to Acute Psychological Stress”	
Dean’s List	Multiple

RESEARCH EXPERIENCE

Graduate Research Assistant	2023-Present
Psychiatric, Behavioral, Aging, & Dementia Genomics Research (P-BADGER) Laboratory, Institute for Behavioral Genetics, University of Colorado Boulder PI: Andrew Grotzinger, PhD	
<ul style="list-style-type: none">• Implementing multivariate genetic methods to elucidate the shared and unique etiologies of childhood-onset neuropsychiatric disorders.• Leveraging genome-wide data to explore transdiagnostic behavioral and health-related features implicated across neurodevelopmental traits.	

Postbaccalaureate Research Fellow

2021-2023

Section on Developmental Neurogenomics, Human Genetics Branch,
National Institute of Mental Health

PI: Armin Raznahan, MD, PhD

Co-Mentor: Srishti Rau, PhD

- Lead investigation on convergent and divergent effects of supernumerary sex chromosome dosage on multidimensional psychopathology and cognitive phenotypes.
- Independently administered neuropsychological assessments to youth, adolescents, and adults with rare genetic and neurodevelopmental syndromes.

Senior Undergraduate Research Assistant

2019-2021

Behavioral Immunology Laboratory, University of Pittsburgh

PI: Anna Marsland, PhD, RN

- Assisted in coordinating the efforts of an NIH-funded clinical trial aimed at identifying mitochondrial responses to an acute laboratory stress task.
- Processed biological samples pertinent to 5+ research studies and trained fellow undergraduates in various wet-lab protocols.

Undergraduate Research Assistant

2020-2021

Behavioral Medicine Research Group, University of Pittsburgh

PI: Thomas Karmarck, PhD

- Assessed participant vital signs and recorded medical history in a protocol investigating psychosocial factors implicated in cardiovascular disease.
- Trained research participants and ensured competence in operating ambulatory blood pressure monitoring equipment.

PEER-REVIEWED JOURNAL ARTICLES

Schaffer, L.S., Breunig, S., Lawrence, J.M. *et al.* Characterizing genetic pathways unique to autism spectrum disorder at multiple levels of biological analysis. *Molecular Autism* 15, 46 (2024). <https://doi.org/10.1186/s13229-024-00624-2>

Schaffer, L.S., Rau, S., Larsen, I.G., ... Raznahan, A. X- vs. Y-chromosome influences on human behavior: a deep phenotypic comparison of psychopathology in XXY and XYY syndromes. *J Neurodevelop Disord* 16, 56 (2024). <https://doi.org/10.1186/s11689-024-09574-5>

Larsen, I.G., Moses, R.M., Seifert, B.A., Liu, S., Li, S., Older, A.J., Levitis, E., **Schaffer, L.S.**, Duncan, R., Jodarski, C., Kamen, M., Yan, J., Lalonde, F.M., Ghosh, R., Torres, E., Clasen, L.S., Blumenthal, J., Similuk, M., Raznahan, A., Walkiewicz, M.A. Deep screening for X chromosome parent-of-origin effects on neurobehavioral and neuroanatomical phenotypes in 47,XXY Klinefelter syndrome. *Biological Psychiatry Global Open Science* 4, 6 (2024). <https://doi.org/10.1016/j.bpsgos.2024.100391>

Raznahan, A., Rau, S., **Schaffer, L.S.**, ... Torres, E. Deep phenotypic analysis of psychiatric features in genetically defined cohorts: application to XYY syndrome. *J Neurodevelopmental Disord* **15**, 8 (2023). <https://doi.org/10.1186/s11689-023-09476-y>

Walsh, C. P., Lindsay, E. K., Grosse, P., Natale, B. N., Fairlie, S., Bwint, A., **Schaffer, L.S.**, McMahon, K., Del Duke, C., Forse, J., Lamonja-Vicente, N., & Marsland, A. L. (2023). A systematic review and meta-analysis of the stability of peripheral immune markers in healthy adults. *Brain, behavior, and immunity*, *107*, 32–46. <https://doi.org/10.1016/j.bbi.2022.09.011>

PREPRINT PUBLICATIONS UNDER REVIEW

Roybal, M.R., Liu, S., Larsen, I.G., Wass, A., **Schaffer, L.S.**, Ajumobi, T., Whitman, E.T., Warling, A., Clasen, L., Blumenthal, J., Rau, S., Raznahan, A. Age-related differences in psychopathology within sex chromosome trisomies. *medRxiv : the preprint server for health sciences*, <https://doi.org/10.1101/2024.11.22.24317803>

Lawrence, J.M., Foote, I.F., Breunig, S., **Schaffer, L.S.**, Mallard, T.T., Grotzinger, A.D. (2024). Shared genetic liability across systems of psychiatric and physical illness. *medRxiv : the preprint server for health sciences*, <https://doi.org/10.1101/2024.08.02.24311427>

Breunig, S., Lee, Y.H., Karlson, E.W., Krishnan, A., Lawrence, J.M., **Schaffer, L.S.**, Grotzinger, A.D. (2024). Examining the genetic links between clusters of immune-mediated diseases and psychiatric disorders. *medRxiv : the preprint server for health sciences*, <https://doi.org/10.1101/2024.07.18.24310651>

TALKS AND PRESENTATIONS

Symposium Presentation, “Genetic Pathways Unique to Autism Spectrum Disorder, Independent of ADHD, at Multiple Levels of Biological Analysis,” Behavior Genetics Association Annual Meeting, London, United Kingdom, June 2024.

Oral Presentation, “Deep Phenotypic Comparison of X- and Y-Chromosome Dosage Effects on Psychopathology,” World Congress on Psychiatric Genetics, Florence, Italy, September 2022.

(Link to talk: <https://www.youtube.com/watch?v=Lo4RhGaZfoI>)

Research Presentation, “Deep Phenotypic Comparison of X- and Y-Chromosome Dosage Effects on Psychopathology,” Center for Autism Spectrum Disorders Research Meeting, Children’s National Hospital, Washington, D.C., October 2022

ABSTRACTS & POSTERS

*Indicates presenter

**Indicates co-presenter

***Schaffer, L.**, Breunig, S., Lawrence, J.M., Foote, I.F., Grotzinger, A.G. (2024, July). Characterizing Genetic Pathways Unique to Autism Spectrum Disorder at Multiple Levels of Biological Analysis. Poster presented at the Ettore Majorana Foundation and Centre for Scientific Culture, Workshop for A New Science of Mental Disorders, Erice, Sicily, Italy.

***Schaffer, L.**, Rau, S., Clasen, L., Warling, A., Whitman, E. T., Nadig, A., McDermott, C., Xenophontos, A., Wilson, K., Blumenthal, J., Torres, E., & Raznahan, A. (2023, April). X-vs. Y-Chromosome Influences on Human Behavior: A Deep Phenotypic Comparison of Psychopathology in XXY and XYY Syndromes. Poster presented at the Society of Biological Psychiatry Annual Meeting, San Diego, CA.

Seifert, B., Duncan, R., Li, S., Gore, R., **Schaffer, L.**, Yan, J., Torres, E., Similuk, M., Bi, W., Dai, H., Older, A., Ghosh, R., Raznahan, A., & Walkiewicz, M. (2022, October). Genome sequencing enables parent of origin analysis of the X chromosome in probands with Klinefelter syndrome. Poster presented at the American Society of Human Genetics Annual Meeting, Los Angeles, CA.

Duncan, R., Gore, R., Similuk, M., Yan, J., **Schaffer, L.**, Setzer M., Kamen, M., Jodarski, C., Torres, E., Blumenthal, J., Dakic, A., Hunt, D., Mixer, M., Beers, B., Seifert, B., Ghosh, R., Raznahan, A., & Walkiewicz, M. (2022, April). The story of the Identical X: Characterizing the Neurocognitive Phenotype in a 47,XXY Cohort. Poster presented at Virtual Postbac Poster Day, National Institutes of Health, Bethesda, MD.

***Schaffer, L.**, Rau, S., Clasen, L., Gao, Y., Arowolo, R., Whitman, E., Warling, A., Wilson, K., Joseph, L., Thurm, A., Torres, E., Blumenthal, J., Kenworthy, L., & Raznahan, A. (2022, April). Deep phenotypic comparison of X- and Y-chromosome dosage effects on psychopathology. Poster presented at the 13th Annual Julius Axelrod Symposium, National Institute of Mental Health, Bethesda, MD.

Bwint, A., Fairlie, S., & ****Schaffer, L.** (2021, April). A systematic review and meta-analysis of the stability of peripheral immune markers in healthy adults. Poster presented at the Laurel Highlands Undergraduate Psychology Research Virtual Conference, St. Francis University, Loretto, PA.

***Schaffer, L.**, Manuck, S., Natale, B., Marsland, A.L. (2021, April). Investigating neuroticism as a moderator of inflammatory and autonomic responses to acute psychological stress. Poster presented at Annual Psychology Department Undergraduate Student Research Poster Session, University of Pittsburgh, Pittsburgh, PA.

WORKSHOPS AND SUPPLEMENTAL TRAINING

Towards a New Science of Mental Disorders: Bridging Evolution and Genetics
International School of Ethology, The Ettore Majorana Foundation and Centre for Scientific Culture, 2024

International Statistical Genetics Workshop – Latent Genetics Course

Institute for Behavioral Genetics, 2024

NIH Diversity and Inclusion Seminar Series

National Institutes of Health, 2022

Advanced Statistical Analysis Using R

Foundation for Advanced Education in the Sciences, 2022

NIMH Trainee Statistics Seminar

National Institute of Mental Health, 2021

CLINICAL EXPERIENCE

Student Therapist, Raimy Psychology Clinic, 2024-Present
University of Colorado Boulder

- Supervisor: Tamar Kodish, PhD

Clinical Research Fellow, Outpatient Behavioral Health Clinic, 2021-2023
National Institutes of Health

- Supervisors: Srishti Rau, PhD & Liv Clasen, PhD

TEACHING EXPERIENCE

Graduate Teaching Assistant Fall 2024
Psychological Statistics – Primary Instructor: Dr. Ryan Curtis
University of Colorado Boulder

Undergraduate Teaching Assistant Multiple
Biochemistry – Primary Instructor: Dr. Erica McGreevy
Psychology of Personality – Primary Instructor: Quyen Do, PhD Candidate
Foundations of Biology I – Primary Instructor: Dr. Erica McGreevy
University of Pittsburgh

AD-HOC PEER REVIEWER

- Developmental Medicine & Child Neurology
- Child Development
- Journal of the American Academy of Child and Adolescent Psychiatry

PROFESSIONAL AFFILIATIONS

- Behavior Genetics Association, Associate Member
- International Society of Psychiatric Genetics, Member

ACADEMIC, COMMUNITY, AND SCHOLARLY SERVICE

Symposium Chair – “Novel Investigations into the Genetic Architectures of Neurodevelopmental Disorders and Traits”

54th Annual Behavior Genetics Association Meeting, London, UK, 2024

Psychologists Advocating for Systemic Training in Antiracism, President

Professional organization aimed towards eliminating systemic boundaries in the field of clinical psychology and fostering allyship towards marginalized communities

NextGen Psych Scholars Program, Mentor

Mentor undergraduate and post-baccalaureate students from marginalized backgrounds interested in doctoral-level training in psychology and related fields

Project SHORT, Mentor

Mentor undergraduate and post-baccalaureate students in the process of applying to graduate or professional school

Brain Exercise Initiative, Volunteer

Lead individuals with Alzheimer’s disease through weekly sets of research-based writing, reading, and math exercises with hopes of attenuating rates of cognitive decline

Curiologie in the Classroom, Volunteer / Lesson Leader

Assist in leading monthly, interactive, after-school lessons to foster excitement for the sciences

SKILLS

Coding and data analysis: R, SPSS, data visualization, structural equation modeling

Applications: R Studio, R Markdown, REDCap, Microsoft Office

PRIMARY RESEARCH INTERESTS

- Behavioral & psychiatric genetics
- Autism spectrum disorders
- Child and adolescent development
- Social behavior
- Biological psychology
- Science communication & dissemination