Curriculum Vitae

Peter Michael Grund

1220 SE Brook Ave, Minneapolis MN, 55414 | grund130@umn.edu |
(612) 396-3078 | petermgrund.netlify.app

Research Goals

- Apply principles of neurology, developmental psychopathology, and cognitive science to better understand the etiology of serious psychiatric conditions. Investigate the biopsychosocial intersections of depression and inflammation in adolescents and young adults. Identify specific behavioral, biological, and neuroimaging markers associated with higher risk profiles and poorer functional outcomes.

Education

- **University of Minnesota, Twin Cities** | Bachelor of Science | Summa Cum Laude, High Distinction | Graduated in May 2022
  - Major: Psychology
  - Minor: Integrative Neuroscience
  - Overall GPA of 4.00

Honors, Awards, and Grants

- 1st Place Poster Award – Minnesota Symposium on Addiction Neuroscience — Awarded 2022
- University of Minnesota Undergraduate Honors Program — Awarded 2020 – 2022
- University of Minnesota National Scholarship — Awarded 2018 – 2022
- College of Liberal Arts Dean's List — Awarded 2018 – 2022
- UMN Diversity in Psychology Program Participant — Awarded 2021
- University of Minnesota Undergraduate Research Opportunities Program Scholarship — Awarded 2020

Research Experience

- **Clinical Researcher (Researcher 2)** | Department of Neurology | University of Minnesota Medical School | Jing Wang, Ph.D., Matthew Johnson, Ph.D. | May 2023 – present

  Coordinated reset for DBS in ET clinical trial (NCT05897775)
  - Initiating an FDA-regulated clinical trial to assess the efficacy and safety of coordinated reset deep brain stimulation (DBS) for treatment-refractory upper extremity essential tremor.
  - Perform comprehensive patient evaluations before and after DBS surgery to assess study eligibility.
  - Collect EMG and upper extremity tremor data during DBS surgery in collaboration with neurosurgeons.
  - Helped write an accessible and plain-language-friendly informed consent document for patients.
  - Developed front-end surveys in REDCap for patients to report treatment outcomes and back-end infrastructure to automatically score and preprocess data.

  Algorithms for programming DBS systems for ET (NCT03984643)
  - Assist physicians in administering the Tremor Research Group Essential Tremor Rating Scale (TETRAS) to patients during DBS programming.
  - Maintain study entry on clinicaltrials.gov website.

- **Lab Coordinator (Researcher 1)** | Brain & Behavioral Processes Lab | University of Minnesota | Monica Luciana, Ph.D. | May 2022 – present
  - Conduct eligibility screenings and behavioral testing for an internally funded longitudinal neurocognitive study of adult medical cannabis users recruited from the community.
  - Schedule behavioral and imaging sessions, including coordination among several team members and research centers outside of the Department of Psychology, including the Departments of Pharmacology and Radiology.
  - Wrote an innovative algorithm in R to approximate daily intake of THC and CBD for study participants from baseline to 4-month follow-up visit; approximations demonstrated a high correlation with actual levels found in blood samples taken at the 4-month follow-up, affirming the accuracy of the algorithm.
  - Assist with behavioral and neuroimaging data analyses using SPSS, R, and FSL/FreeSurfer programs.

- **Independent Research Project** | Brain & Behavioral Processes Lab | University of Minnesota | Monica Luciana, Ph.D., Samuel Klein, M.S. | June 2020 – present

- Wrote proposal for original research on the predictive role of cognitive impulsivity in a longitudinal study of alcohol and cannabis use and was awarded $1550 to conduct analysis and cover research expenses.
- Presented preliminary findings at the Minnesota Undergraduate Research Symposium and the Society for Research on Adolescence.
- Won best poster award at the 2022 Minnesota Symposium of Addiction Neuroscience amidst competing posters by Ph.D. students, post-docs, and academic faculty members.
- Currently writing a manuscript of results for publication in *Psychology of Addictive Behaviors.*

❖ **Research Assistant** | Brain & Behavioral Processes Lab | University of Minnesota | Monica Luciana, Ph.D. | September 2019 – May 2022

- Trained undergraduate and graduate students in the administration of cognitive and computerized tasks.
- Oversaw participant recruitment for two studies and maintained secure recruitment databases.
- Conducted behavioral assessments for a study of reward processing and motivational systems in young adults.

❖ **Data Manager** | Minnesota Center for Twin and Family Research | University of Minnesota | June 2021 – May 2022

- Created datasets and scripts for MCTFR researchers collected by several ongoing research studies such as the Adolescent Brain and Cognitive Development study (ABCD) and the Sibling Interaction and Behavior Study (SIBS).
- Entered collected behavioral data onto the University's servers.

❖ **Health Scientist** | Cognition and Brain in Psychopathology Lab | Minneapolis Veterans Affairs Health Care System | Seth Disner, Ph.D., Scott Sponheim, Ph.D. | July 2020 – November 2021

- Analyzed veteran medical records to determine eligibility in study relating to traumatic brain injury rehabilitation.
- Conducted in-depth phone screenings for all participants to ensure study eligibility.
- Participated in TBI outpatient rounds and consensus meetings.
- Extended work for a Summa Cum Laude level Honors Thesis: *Genetic Influences on Verbal Memory Efficiency Following a Mild Traumatic Brain Injury*.

Publications

❖ Klein, S., Collins, P.F, Alschuler, V., **Grund, P.M**., Luciana, M. (submitted). *Frontostriatal Networks Exhibit Functional Segregation During Adolescence that Follows a Ventral-Dorsal Gradient: Developmental Trajectories and Longitudinal Associations*. Journal of Neuroscience.

Conference Presentations

❖ Lozano Wun, V., Collins, P.F, Klein, S., **Grund, P.M.**, Luciana, M. (2023). *Within-person mismatch of reward responsiveness and executive functioning: A longitudinal validation of the dual systems model from childhood to adulthood*. Presented at the Research Society of Alcoholism. Bellevue, WA.

❖ **Grund, P.M.**, Klein, S., Collins, P.F., Luciana, M. (2022). *Greater Temporal Discounting is Associated with Higher Alcohol Consumption in Adolescents and Young Adults*. Presented at the Minnesota Symposium on Addiction Neuroscience. Minneapolis, MN.

❖ Klein, S., Collins, P.F, Alschuler, V., **Grund, P.M**., Luciana, M. (2022). *Development of Corticostriatal Connectivity During Adolescence Supports a Dorsal-Ventral Gradient of the Human Striatum.* Presented at Flux Society Conference. Paris, France.

❖ Alschuler, V., Collins, P.F, Klein, S., **Grund, P.M.**, Luciana, M. (2022). *Dual-System Model as Indicated by Working Memory, Discounting, and Reward Sensitivity: Impacts of Age and Sex.* Presented at the Annual Meeting of the Cognitive Neuroscience Society. San Francisco, CA.

❖ **Grund, P.M.**, Disner, S., Sponheim, S. (2022). *Genetic Influences on Verbal Memory Efficiency Following a Minor Traumatic Brain Injury.* Presented at the Minnesota Undergraduate Psychology Conference. Saint Paul, MN.

❖ **Grund, P.M.**, Klein, S., Collins, P.F., Luciana, M. (2022). *Temporal Discounting-based Cognitive Impulsivity in Adolescents Pre versus Post Substance Use Initiation*. Presented at the biennial meeting of the Society for Research on Adolescence. New Orleans, LA.

❖ **Grund, P.M.**, Sponheim, S., Disner, S. (2021). *Role of the APOE Gene on Verbal Learning Following a Minor Traumatic Brain Injury*. Presented at VA Research Week. Minneapolis VA Health Care System, MN.

- **Grund, P.M.**, Klein, S., Collins, P.F., Luciana, M. (2020). *Frequent Marijuana Users Display Greater Delay Discounting Prior to Substance Use Initiation*. Presented at the Minnesota Undergraduate Research Symposium. Minneapolis, MN.

Clinical and Teaching Experience

- **Patient Advocate** | SE Seniors | Minneapolis | June 2023 – present
  - Serve as patient advocate during medical appointments with older adults in my neighborhood.
  - Provide transportation to and from appointment.
  - Facilitate the clear communication of patient concerns and potential barriers to healthcare providers and ensure patient understanding of physician's recommendations.
  - Manage follow-up procedures with local care teams to track adherence to recommended therapies.
- **Teaching Assistant** | Human Neuroanatomy (NSCI 2101) | University of Minnesota | Maureen Riedl, Ph.D., Martin Wessendorf, Ph.D. | August 2020 – December 2021
  - Prepared and guided students through sheep brain dissections.
  - Assisted students in identifying major brain regions in the intact brain and dissected brainstem, and Nissl slides of human specimens.
  - Led three human cadaver labs in which I performed dissections, reviewed medical histories, and taught anatomy of the brain and its relationships to the body's major arteries, veins, cranial nerves, foramina, and sinuses.
  - Instructed students on neuroanatomy and neurophysiology, covering topics such as ventricles, cerebrospinal fluid flow, cerebral and spinal blood supply, cellular structure variations across brain regions, membrane potential, somatosensory and motor pathways, mechanosensation, and the visual and auditory systems.

Affiliations

- **Pedestrian Advisory Committee member** | City of Minneapolis 2023 – present
  - Council-appointed member for Ward 2, which includes the University of Minnesota west bank campus.
  - Provide advice to the Mayor and City Council on developing policies and programs to improve pedestrian safety, mobility, and accessibility.
  - Member of the Engineering Subcommittee which advises on capital projects within Minneapolis.
- **Citizen Review Panel member** | Chisago County 2023 – present
  - Facilitate community involvement in child protection systems, assess county and state social work practices, advocate for resources to address racial disparities in the child protection system.
  - Analyze trends to provide the country with insights, trends, and to verify compliance with the Abuse Prevention and Treatment Act (CAPTA) 5 Year Plan.

Languages, Technical Skills, and Certifications

- Advanced proficiency in R programming language Present
- Experience using Statistical Package for the Social Sciences (SPSS) Present
- Experience using FreeSurfer imaging software for functional and structural brain analysis Present
- Essentials for Regulatory Specialists certification earned 2023
- Foundations for Research Professionals certification earned 2023
- CITI certifications
  - *Good Clinical Practice and Human Research Protections for Biomedical Study Teams*
  - *Research Involving Human Subjects (RCR)*
  - *RCR Core*
  - *Social and Behavioral Research Best Practices for Clinical Research*

References

Available upon request.