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Madeleine N. Goldberg

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EDUCATION

University of Oregon 2023- present

Ph.D. Student, Developmental Psychology

Masters Thesis (in-progress): *Adolescent neurodevelopment and social motivation: unraveling hormonal influences across the pubertal transition*

Advisor: Dr. Jennifer H. Pfeifer

GPA: 4.05

University of Pittsburgh 2017- 2021

B.S., Psychology with Honors Distinction (Minors: Applied Statistics, Sociology)

Thesis: *The Effects of Pubertal Maturation and Hormones on Delayed Discounting in Early Adolescence*

Advisor: Dr. Cecile D. Ladouceur

GPA: 3.6

SELECTED HONORS & AWARDS

NET Neuroscience Fellowship ($10,000), *University of Oregon* 2024

First Year Merrit Award ($4,000), *University of Oregon* 2024

Promising Scholar Award ($8,000), *University of Oregon* 2023

NIMH Training Day 3-Minute Talk Competition Finalist, *National Institutes of Health* 2022

Postbaccalaureate Intramural Research Training Award Fellow, *National Institutes of Health* 2021-2023

Magna Cum Laude, *University of Pittsburgh* 2021

Honors in Psychology Distinction, *University of Pittsburgh* 2021

Dean's List, *University of Pittsburgh* 2018- 2021

RESEARCH EXPERIENCE

Doctoral Research 2023- present

Developmental Social Neuroscience Laboratory, Department of Psychology, University of Oregon, Eugene, OR

PI: Dr. Jennifer H. Pfeifer

Primary Mentors: Dr. Elizabeth Shirtcliff; Dr. Vishnu Murty; Dr. Robert Chavez; Dr. Amalia Skyberg; Dr. Ava Reck

- Facilitate MRI scanning sessions and salivary assay collection for female adolescents undergoing puberty
- Repair and update preprocessing pipelines allowing functional neuroimaging data from fMRIprep to integrate seamlessly with the comprehensive analysis tools provided by AFNI
- Troubleshoot and repair salivary hormone preprocessing scripts for raw data
- Analyze longitudinal structural MRI data from adolescent girls to determine developmental trajectories of the hippocampus, and construct cubic spline interpolations of these data across pubertal development and age
- Perform multivariate analyses of behavioral data to determine the development of socially-driven reward-related behaviors during adolescence, and the effects that various indices of pubertal maturation may have on these changes (e.g., pubertal stage, hormone levels)
- Collect, manage, and analyze structural and functional MRI data from adolescent girls undergoing puberty to elucidate the relationships between brain function, adrenal and gonadal hormones, age, and sex
- Assisted in manuscript review under the mentorship of Dr. Pfefier, providing feedback and input on the review process for a special-issue of *Society on Biological Psychiatry*

Postbaccalaureate Intramural Research Training Award Fellow 2021- 2023

Section on Behavioral Endocrinology, Section on Integrative Neuroimaging, National Institutes of Mental Health, National Institutes of Health, Bethesda, MD

PI: Dr. Peter J. Schmidt; Dr. Karen F. Berman

Primary Mentors: Dr. Shau-Ming Wei, Staff Scientist; Dr. Katherine M. Cole, Postdoctoral Fellow

- Co-lead research coordinator for *The NIMH Intramural Study on the Endocrine and Neurobiological Events Accompanying Puberty*, a longitudinal neuroimaging protocol elucidating the relationship between brain function, endocrine and metabolic events, age, and sex
- Coordinate study visits for children and adolescents undergoing puberty (e.g., MRI scanning, scheduling neuropsychological testing and radiology appointments, and facilitating clinic appointments)
- Perform multivariate analyses of fMRI data to determine the effects of adrenal androgen dehydroepiandrosterone sulfate (DHEAS) on reward-related brain function in prepubertal typically developing children, and construct spline model trajectories of longitudinal reward-related brain activation
- Analyze longitudinal structural MRI data from typically developing children and adolescents to determine associations between rate of structural brain development and the tempo of pubertal development determined by Tanner staging
- Collect, manage, and analyze structural and functional MRI data from typically developing children and adolescents undergoing puberty to elucidate the relationships between brain function, adrenal and gonadal hormones, age, and sex
- Collect structural and functional MRI data and process surface and volumetric PET data from adult inpatients with schizophrenia as part of a longitudinal, double-blind medication withdrawal study
- Collect and analyze menstrual data, antipsychotic medication dosage, and psychotic symptoms to investigate the effects of menstrual cycle phases on psychotic symptom severity in sample of female adults with schizophrenia

Undergraduate Research Assistant 2019- 2021

Cognitive-Affective Neuroscience and Development Lab, University of Pittsburgh, Pittsburgh, PA

PI: Dr. Cecile D. Ladouceur

- Conducted senior honors thesis on the effects of adrenal androgens, gonadal sex steroid hormones, and pubertal development on behavioral outcomes of a reward task in typically developing adolescents using secondary data analyses in SPSS and R
- Administered computerized cognitive tasks targeting reward and emotional processing and facilitated neuroimaging appointments for study participants recruited from local communities
- Organized and managed data from actigraphy watches and neuropsychological testing and diagnostic interviews (i.e., CTQ, K-SADS-PL) to contribute to a comprehensive multimodal database

POSTERS & PRESENTATIONS

Goldberg, M.N., Wei, S.M., Cole, K.M., Kippenhan, J.S., Gregory, M.D., Recto, C.A., Wilder, I.M., Wright, D.S., Nieman, L.K., Yanovski, J.A., Schmidt, P.J., Berman, K.F. (2023) *Developmental Trajectory of Reward-Related Brain Activations in Typically Developing Children*. NIMH Intramural Julius Axelrod Symposium, Bethesda, MD.

Goldberg, M.N., Wei, S.M., Cole, K.M., Kippenhan, J.S., Gregory, M.D., Kippenhan, J.S., Recto, C.A., Wilder, I.M., Wright, D.S., Nieman, L.K., Yanovski, J.A., Schmidt, P.J., Berman, K.F. (2023) *Developmental Trajectory of Reward-Related Brain Activations in Typically Developing Children*. Cognitive Neuroscience Society Annual Meeting, San Francisco, CA.

Wright, D.S.**,** Wei, S.M., Kippenhan, J.S., Gregory, M.D., Cole, K.M., **Goldberg, M.N.**, Recto, C.A., Wilder, I.M., Nieman, L.K., Yanovski, J.A., Schmidt, P.J., Berman, K.F. (2023) *Developmental Trajectories of Working Memory-Related DLPFC and Hippocampal Recruitment across Puberty in Typically Developing Children*. Society of Biological Psychiatry Annual Meeting, San Diego, CA.

Wilder, I.M.**,** Wei, S.M., Kippenhan, J.S., Gregory, M.D., Cole, K.M., **Goldberg, M.N.**, Recto, C.A., Wright, D.S.,

Nieman, L.K., Yanovski, J.A., Schmidt, P.J., Berman, K.F. (2023) *A Longitudinal Analysis of Pubertal Tempo and Myelination in Typically Developing Children*. Society of Biological Psychiatry Annual Meeting, San Diego, CA.

Recto, C., Wei, S.M., Eisenberg, D.P., Kohn, P.D., Gregory, M.D., Czarapata, J.B., **Goldberg, M.N.**, Wilder, I.M., Schmidt, P.J., Berman, K.F. (2023) *Effect of Menstrual Cycle Phase on Presynaptic Dopamine Function in Healthy Women*. Society of Biological Psychiatry Annual Meeting, San Diego, CA.

Kazi, F.T**.,** Wei, S.M., Kippenhan, J.S., Gregory, M.D., Cole, K.M., **Goldberg, M.N.**, Recto, C.A., Wilder, I.M., Wright, D.S., Nieman, L.K., Yanovski, J.A., Schmidt, P.J., Berman, K.F. (2023) *Sex Differences in Longitudinal Trajectories of Regional Cerebral Blood Flow During Child Development and Adulthood*. Society of Biological Psychiatry Annual Meeting, San Diego, CA.

Goldberg, M.N., Wei, S.M., Cole, K.M., Martinez, P.E., Gregory, M.D., Kippenhan, J.S., Trevorrow, Z.H., Myers, O.T.T., Recto, C., Kohn, P.D., Nieman, L.K., Yanovski, J.A., Schmidt, P.J., Berman, K.F. (2022) *Reward-related Brain Function and Puberty in Healthy Children*. NIMH Training Day, Bethesda, MD.

Goldberg, M.N., Wei, S.M., Cole, K.M., Martinez, P.E., Gregory, M.D., Kippenhan, J.S., Trevorrow, Z.H., Myers, O.T.T., Recto, C., Kohn, P.D., Nieman, L.K., Yanovski, J.A., Schmidt, P.J., Berman, K.F. (2022) *Correlation between reward-related brain function and serum dehydroepiandrosterone sulfate (DHEAS), and indicator of adrenarcheal development, in prepubertal children*. Society of Biological Psychiatry Annual Meeting, New Orleans, LA.

Wei, S.M., **Goldberg, M.N.**, Cole, K.M., Martinez, P.E., Gregory, M.D., Kippenhan, J.S., Trevorrow, Z.H., Myers, O.T.T., Recto, C., Kohn, P.D., Nieman, L.K., Yanovski, J.A., Schmidt, P.J., Berman, K.F. (2022) *Effects of Adrenarche on Reward-related Neural Processing in Prepubertal Children*. American College of Neuropsychopharmacology Annual Meeting, Phoenix, AZ.

Eisenberg, D.E, Kohn, P.D., Gregory, M.D., Czarapata, J.B, Dickinson, D., Blackman, R.B., Recto, C. **Goldberg, M.N.**, Berman, K.F. (2022) *Striatal dopamine synthesis capacity and genetic liability for treatment-resistant schizophrenia in healthy adults*. American College of Neuropsychopharmacology Annual Meeting, Phoenix, AZ.

Gouvea, A.E., Wei, S.M., Cole, K.M., Martinez, P.E., Gregory, M.D., Kippenhan, J.S., Trevorrow, Z.H., Myers, O.T.T., Recto, C., **Goldberg, M.N.**, Kohn, P.D., Nieman, L.K., Yanovski, J.A., Schmidt, P.J., Berman, K.F. (2022) *Association of DHEAS, an indicator of adrenarcheal development, with brain function during an inhibitory control task in prepubertal children*. Society of Biological Psychiatry Annual Meeting, New Orleans, LA.

Recto, C., Cole, K.M., Wei, S.M., Martinez, P.E., Gregory, M.D., Kippenhan, J.S., Trevorrow, Z.H., Myers, O.T.T., **Goldberg, M.N.**, Kohn, P.D., Nieman, L.K., Yanovski, J.A., Schmidt, P.J., Berman, K.F. (2022) *Effects of adrenarche and sex on neural function during perception of faces in prepubertal children*. Society of Biological Psychiatry Annual Meeting, New Orleans, LA.

CLINICAL EXPERIENCES

Clinical Shadowing 2022- 2023

Clinical Research Adult Inpatient Psychiatric Unit, National Institutes of Mental Health, National Institutes of Health, Bethesda, MD

Primary Mentors: Dr. Daniel P. Eisenberg, Medical Director; Dr. Rachael K. Blackman, Postdoctoral Clinical Fellow; Maria Tietcheu, Clinical Research Nurse Practitioner

- Observe staff psychiatrist and nurse practitioner round with adult inpatients diagnosed with schizophrenia on a locked psychiatric research unit
- Attend daily morning nursing report to discuss inpatient medical and behavioral health staff psychologist, physicians, and other relevant clinical staff
- Participate in treatment team meetings to discuss patient progress in the study, treatment plans, and collaborative care strategies, enhancing understanding of interdisciplinary approaches in psychiatric care

Schizophrenia Inpatient Clinical Program 2022- 2023

Clinical Research Adult Inpatient Psychiatric Unit, National Institutes of Mental Health, National Institutes of Health, Bethesda, MD

Primary Mentors: Dr. Ann Reifman, Inpatient Clinical Psychologist

- Participate in occupational and recreational groups with adult inpatients diagnosed with schizophrenia
- Attend weekly discussion of patient interaction with staff psychologist, physicians, and other clinical staff on inpatient schizophrenia unit

Student Behavioral Associate 2020- 2021

Adult Inpatient Dual Diagnosis Unit, UPMC Western Psychiatric Institute and Clinic, University of Pittsburgh, Pittsburgh, PA

Primary Mentors: Dr. Scott Lewis, Unit Director; Dr. Antoine B. Douaihy, Attending Psychiatrist; Dr. Hader A. Mansour, Attending Psychiatrist

- Supported and advocated for adults with co-occurring substance use and psychiatric disorders
- Documented mental status evaluations, suicidality, homicidality, and risk & protective factors
- Collaborated with multi-disciplinary medical team in the provision of physical care and clinical intervention
- Encouraged or assisted patients to perform activities of daily living and managed crisis situations therapeutically

TEACHING EXPERIENCE

Teaching Assistant 2024- present

Social Development (PSY 478/578)
Instructor: Jennifer Pfeifer, Ph.D.
Department of Psychology, University of Oregon, Eugene, OR

- Develop, co-lead, and grade weekly quizzes and small-group outreach projects on socio-emotional development each week
- Facilitate small-group discussion with enrolled undergraduate and graduate students to discuss socio-cultural contexts that shape adolescent socio-emotional development

Teaching Assistant 2024

Infancy (PSY 479/579)
Instructor: Jennifer Ablow, Ph.D.
Department of Psychology, University of Oregon, Eugene, OR

- Facilitated small-group discussion with enrolled undergraduate students to brainstorm and implement outreach brochures to infant-centered community resources
- Oversaw literature reviews, idea development, and creation of educational material aimed at parents and expecting parents of infants in the local community
- Organized and coordinated outreach events that engaged students with local community organizations, enhancing awareness of infant-centered resources while showcasing the practical student involvement in community service

Teaching Assistant 2023-2024

Developmental Psychopathology (PSY 480/580)
Instructor: Michelle Fenesy, Ph.D.
Department of Psychology, University of Oregon, Eugene, OR

- Developed, co-lead, and graded weekly reading summaries of peer-reviewed publications on developmental psychopathology presentation, diagnosis, intervention, and treatment
- Facilitated midterm and final exam review sessions revisiting course material
- Provided individualized feedback and support to students on their assignments, fostering a deeper understanding of developmental psychopathology concepts and encouraging critical thinking skills

SCIENTIFIC OUTREACH

STEM Workshop Leader 2024

Science Program to Inspire Creativity and Excellence (SPICE), University of Oregon, Eugene, OR

Primary Mentors: Dr. Amalia Skyberg

- Developed a hands-on STEM activity to engage middle and high school girls understand genetics and adolescent development
- Guided students through scientific experiments, promoting critical thinking and inquiry-based learning
- Facilitated science workshops, fostering interest in STEM fields among underrepresented groups

Student Presenter 2024

Student Academy to Inspire Learning (SAIL), University of Oregon, Eugene, OR

Primary Mentors: Dr. Amalia Skyberg; Dr. Sara Hodges

- Designed and developed an interactive lesson to engage high school students in adolescent social development
- Delivered a presentation and workshop aimed at fostering curiosity and academic skills in developmental social neuroscience
- Worked alongside university faculty, staff, and fellow student presenters to create interdisciplinary learning experiences between developmental social neuroscience and epigenetics

Data Analytics Mentor 2020- 2021

Pittsburgh DataWorks DataJam, University of Pittsburgh, Pittsburgh, PA

Primary Mentors: Dr. Judy Cameron, Professor of Psychiatry, Neuroscience & OB/GYN

- Provided direction for searching public datasets and formulating hypotheses
- Taught high school students basic data analysis, interpretation, and visualization
- Created a beginner's tutorial on running ANOVA in R Studio

SKILLS

*Neuroimaging***:** MRI/fMRI/rsFMRI, AFNI, PET, DTI, FSL, Freesurfer, SPM
Behavioral Science: Psychological Literary Review, Behavioral Coding, Data Entry, Neuropsychological Tests
Statistics: Data Analysis, IBM SPSS, R, Minitab, Jamovi, Bash Shell, Python
Pharmacological Familiarity (in relation to addiction): Alcohol Use Disorders, Opioid Use Disorders, Nicotine/Smoking Cessation, Co-occurring Disorders

PROFESSIONAL AFFILIATIONS

Flux Congress
Cognitive Neuroscience Society
Society of Biological Psychiatry
Phi Eta Sigma
Psi Chi