

EDUCATION

Rutgers University- Newark; Newark, NJ 07102

2024- Present

Neuroscience, Ph.D. at the Center for Molecular and Behavioral Neuroscience

Advisors: Elizabeth Holly, Ph.D.

Focus: The impact of early life stress on dopamine kinetics and adulthood decision-making.

Rutgers University- Newark; Newark, NJ 07102

2021-2023

Major(s): Bachelor of Arts in Neuroscience and Behavior (GPA: 3.7/4.0)

Bachelor of Arts in Psychology (GPA: 4.0/4.0)

Advisors: Mauricio Delgado, Ph.D. & Jamil Bhanji, Ph.D.

Thesis: Smoking withdrawal-related stress and associations with smoking behavior, craving, and coping strategies

HONORS & AWARDS

Graduate School of Newark (GSN) Travel Grant

2025

Mei-fang Cheng Award Recipient

2024

Summer Undergraduate Research Fellowship

2023

Dean's List

2021-2023

National Honors Society

2018

AFFILIATIONS

Tau Sigma National Honors Society

2022

American Psychological Association

2021

POSTERS

M.G. Roloff (2024) Stress, Cravings, and Coping in Smoking Withdrawal.

Senior Honors Thesis presented at Rutgers University Research Week 2024.

N. J. Dennis, J. P. Bhanji, A. Riahinezhad, T. Bulgin, **M. Roloff**, H. Morales, M. Halfield, L. Piotrowiak, M. R. Delgado (2025) Neural and affective responses to positive autobiographical memory differentiate smoking behavior.

Presented by Nicholas Dennis at Social and Affective Neuroscience Society Conference 2025.

M.G. Gordon, J. Ghaly, E.N. Holly (2025) Cut Off, Tuned Up: Adolescent Social Isolation Amplifies Dopamine Signaling in the Dorsomedial Striatum

Presented at Gordon Research Seminar & Conference: Catecholamines. August 2025.

Presented at Rutgers Annual Brain Health Institute (BHI) Symposium, December 2025.

RESEARCH

Doctoral Thesis Lab

September 2024- Present

Rutgers University- Newark

PI: Elizabeth Holly, Ph.D.

Project description: Consequences of adolescent social isolation on dopaminergic release kinetics in adulthood

Lab Manager & Research Coordinator

January 2024- August 2024

Rutgers University- Newark

PI: Elizabeth Tricomi, Ph.D.

Project Description: 1) *Neural Investigations of Feedback-Based Learning* 2) *The Role of Math Anxiety in Processing Feedback about Math Performance*

- Held weekly lab meetings where we discussed different articles brought in by the PI, graduate and undergraduate students, and me.

- I created a new IRB protocol and collaborated with other labs to obtain all the necessary information for a new project.
 - I submitted a new IRB protocol to Rutgers University's eIRB and made all necessary changes.
- I attended a graduate-level psychology statistics course (see relevant coursework below) to improve my understanding of and skills in R.
- I worked with a graduate student on their new project using PsychoPy.
- I ran participants in behavioral tasks and participated as a confederate for other research studies.

Post-Baccalaureate Research Assistant

January 2024- August 2024

Rutgers University- Newark

PI: Mauricio Delgado, Ph.D.

Project Description: *Affective Responses in Smokers and Non-Smokers*

- Responsible for compiling participant data and transferring it to a remote server.
- Created data dictionaries for different study components and uploaded them to a remote server.
- Did a complete analysis of participant fMRI data through CONN Toolbox in MATLAB.

Senior Honors Thesis

May 2023- December 2023

Rutgers University- Newark

Advisors: Mauricio Delgado, Ph.D. & Jamil Bhanji, Ph.D.

Project Description: *Affective Responses in Smokers and Non-Smokers*

Thesis: Smoking withdrawal-related stress and associations with smoking behavior, craving, and coping strategies

- I investigated the relationship between stress, craving, and mood in cigarette smokers.
- I ran participant sessions, including autobiographical interviews and fMRI scanning sessions
- I collected and analyzed participants' behavioral and neural data for my thesis using R and RStudio.
- I presented findings at Research Week 2024 (see presentations)

Undergraduate Research Assistant

August 2022- December 2023

Rutgers University- Newark

PI: Mauricio Delgado, Ph.D.

Project Description: *Affective Responses in Smokers and Non-Smokers*

- I attended weekly lab meetings, where I presented articles and data from my thesis.
- I assisted graduate students with data collection and programming experiments with PsychoPy and MATLAB.
- I ran participant sessions, including autobiographical interviews and fMRI scanning sessions
- I ensured that participant data was up to date for the scanning sessions and all necessary paperwork was printed and signed.
- I completed my Senior Honors Thesis (see above).

ATTENDED CONFERENCES AND WORKSHOPS

Catecholamines 2025 hosted by Gordon Research Conferences in Newry, Maine, USA.

NYCPW 2025 hosted by Mount Sinai Center for Computational Psychiatry in New York, NY, USA.

TEACHING

Neuroscience Research Methods

Spring 2026

- Lead lab sessions for undergraduate students at Rutgers University-Newark
- Graded students weekly assignments and final paper

RELEVANT SKILLS & TRAININGS

Programming: MATLAB, Python, R

Certifications: Lab Safety Training / RTK-HAZCOM / Chemical Hygiene / Biosafety / Blood Borne Pathogen. Rodent survival surgery.

Equipment: Fast scan cyclic voltammetry (FSCV), Patch clamping, Vibratome, Fiber Photometry, Neurolucida microscope, Confocal Microscope

Rodent: Handling, toe clipping, stereotaxic surgery (implants, viral injections), transcardial perfusions, ear punching, tissue collection, estrous cycle collection, breeding.

Experimental Design Software: PsychoPy, Qualtrics, Pavlovia, CONN Toolbox

Statistical Software: SPSS, RStudio, Demon

Clinical Interviewing: Positive and Negative Affect Schedule, Ecological Momentary Assessment, Questionnaire of Smoking Urges, Autobiographical Memory Questionnaire

Neuroimaging: Siemens 3T Prisma Certified Level 2 Operator
