

María Alejandra Martínez-Ortiz

mm13852@nyu.edu | [LinkedIn](#) | (+1) 347-249-6184

New York, NY, United States

EDUCATION

2018 – 2023 **National University of Colombia (UNAL), Bogotá, DC**
Bachelor of Arts in Psychology with honors,
GPA: 4.6/5.0 (Class Rank 2nd out of 43)
Concentration: Behavioral Neuroscience
Honors thesis: “Effects of early social isolation on exploratory and locomotor behavior of Wistar rats in a Conditioned Place Preference paradigm” ([PDF](#))
Advisor: Marisol Lamprea Rodríguez, Ph.D.

RESEARCH EXPERIENCE

August 2023 – Present **Lab Manager**, Hartley Lab
New York University, New York, NY
Advisor: Catherine Hartley, Ph.D.

- Participant recruitment and testing (behavioral, psychophysiological, and brain imaging studies).
- Data management and analysis.
- Experimental paradigm development.
- Lab administration including managing IRB protocols, participant recruitment activities, and training other lab members.

March 2021 – June 2023 **Undergraduate Research Intern**, Neurosciences Lab
National University of Colombia, Bogotá DC
Advisor: Marisol Lamprea Rodríguez, Ph.D.

- Explored the effects of early social isolation on the exploratory behavior and locomotor activity of rodents in Conditioned Place Preference (CPP) paradigm.
- Collaborated in the design and implementation of behavioral assessment protocols to measure spatial memory, anxiety, and motivation in animal models (Barnes Maze, CPP, Elevated Plus Maze).
- Analyzed neurophysiological samples by performing immunohistochemistry protocols for the quantification of proteins in the rodent brain.
- Handled all intellectual duties related to the final manuscript of my thesis, which included performing literature reviews, analyzing data (+200 animal subjects) through coding, generating charts and illustrations, and producing the final written output.

August 2022 – **Visiting Research Scholar**, MR Spectroscopy Lab
February 2023 *Purdue University, West Lafayette, IN*
Advisor: Ulrike Dydak, Ph.D.

- Investigated manganese accumulation in the cerebellum of welders and its relationship with cognitive performance, mood, and motor functioning.
- Coordinated the recruitment and assessment of participants by applying NIH neuropsychological testing.
- Collaborated with graduate students in scanning sessions as a secondary operator of a 3T Siemens MRI scanner.
- Collected and analyzed neuroimaging data using MicroDicom and SPM, and in-vivo spectroscopy data using Osprey on MATLAB for an independent research project focused on the cerebellum.
- Presented research findings in team meetings and academic conferences.

POSTER PRESENTATIONS AND TALKS

Nora C. Harhen, Noam Goldway, **María A. Martínez-Ortiz**, Yvette Ma, Catherine A. Hartley. (2024). *Do early-life environments shape clinically-relevant learning computations?* Poster presented at the Computational Psychiatry Conference, University of Minnesota, USA.

V. Martin-Neira & **M. Martínez-Ortiz**. (2023). *Changes in social interaction and brain dopamine activity associated with social isolation during adolescence*. Poster presented at the XIII National Congress | XIV International Seminar on Neurosciences COLNE - IBRO, Cali, Colombia.

M. Martínez-Ortiz. (2023). *Magnetic Resonance Imaging (MRI) and Spectroscopy (MRS) for the study of metal deposition in the human cerebellum*. Talk presented at the UREP-C Final Symposium at Purdue University, West Lafayette, IN.

M. Martínez-Ortiz, G. Nossa, H. Monsivais, S. Snyder, S. E. Zauber, and U. Dydak. (2023). *What does Neuroimaging of the Cerebellum in Welders Exposed to Manganese tell us about Motor Function?* Poster presented at the Society of Toxicology Conference, Nashville, TN.

M. Martínez-Ortiz, Monsivais, H., Nossa, G., and Dydak, U. (2022) *Sex differences and hemispheric laterality in iron deposition in deep cerebellar nuclei*. Poster presented at the Women's Health Research Symposium, Purdue University, West Lafayette, IN.

TEACHING EXPERIENCE

February 2023 – **Art Appreciation and History**

June 2023

Role: *Undergraduate Teaching Assistant*

Department of Fine Arts, National University of Colombia

- Provided academic support and feedback to +160 students from different programs taking the art elective course.
- Attended weekly meetings with the professor to coordinate assignments and evaluate exams and class assignments.
- Mentored the students in the final project of the class by guiding them during the choice and analysis of a work of art.

September 2021 – **Biological Basis of Behavior**

July 2022

Role: *Undergraduate Teaching Assistant*

Department of Psychology, National University of Colombia

- Provided academic support to +80 first year students taking a mandatory course on neurobiology and neuropsychology.
- Designed study materials and scheduled tutoring sessions to solve doubts and clarify concepts about the class.
- Guided students in developing study strategies, time management and techniques for effective reading of scientific literature.

February 2021 – **Fundamentals of Psychology**

August 2021

Role: *Undergraduate Teaching Assistant*

Department of Psychology, National University of Colombia

- Designed and created interactive and multimedia content to use as a support in the introductory class in psychology for +80 enrolled students.
- Constructed and graded assignments and exams that covered the main concepts of the class.
- Held office hours to mentor first semester students on academic requirements and undergraduate opportunities in psychology.

HONORS AND AWARDS

2023

Recognized as one of the top national scores in the Higher Education Quality State Test, SABER PRO (formerly ECAES).

2018 – 2023	Dean's List - Full tuition scholarship for being part of the top 15 academic averages of the psychology program in Fall 2018, Spring 2023.
2022	Undergraduate Research Experience Purdue – Colombia (UREP-C). Full Scholarship.
2021	Scholar selected for the "+Women, +Science, +Equity" program of the Ministry of Science and Technology of Colombia and the Organization of Ibero-American States (OEI).

SHORT COURSES AND CERTIFICATIONS

2022	CITI Program Course: Group 1. Biomedical Research Investigators and Key Personnel
2022	CITI program: Responsible Conduct of Research (RCR) Training - Undergraduate Course
2022	Certificate in STEAM skills and Project Formulation - Ministry of Science and Technology of Colombia and the Organization of Ibero-American States (OEI).
2022	IELTS Certificate: 8.5/9.0
2021	Coursera MOOCs: Quantitative Methods by University of Amsterdam, Python Data Structures by University of Michigan.

OUTREACH AND VOLUNTEERING

2021- 2022	<p>“Un Techo Para Mi País” Foundation</p> <p>Role: <i>Volunteer for the Transitional Housing and Social Inclusion program</i></p> <ul style="list-style-type: none"> • I was part of an interdisciplinary team in which I improved my interviewing and communication skills by applying surveys and questionnaires to underserved populations. • Mediated the decision-making process regarding the equitable allocation of resources to the most underprivileged families. • Cooperated with my team in the construction of emergency housing and the placement of the beneficiaries in their new homes.
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SKILLS

Software: Microsoft Office, Google Suite, SPSS, JASP, GraphPad Prism, AnyMaze, ImageJ, PsychoPy, RedCap, Qualtrics, Illustrator, Photoshop.

Programming languages: R (experienced), Python (experienced), MATLAB-SPM (beginner), JavaScript-jsPsych (experienced), Stan (beginner).

Neuroimaging: EEG (beginner), MRI (Level 3 Operator Trained), fMRI, and MRS.

Languages: Spanish (native), English (C2-advanced).

MEMBERSHIPS

2024-	Society for Advancement of Chicanos/Hispanics & Native Americans in Science (SACNAS)
2024 -	Flux Society
2023 -	Científico Latino
2023 -	Project SHORT
2022 -	Colombian Student Association at Purdue University
2021 -	Colombian College of Neurosciences (COLNE)