

DIEGO LIEVANO PARRA

I am a behavioral neuroscientist with a multidisciplinary background spanning psychology, neurophysiology, and systems neuroscience. My research focuses on understanding how corticostriatal and astrocytic circuits mediate decision-making, cognitive flexibility, and affective regulation. I have conducted experimental work in Colombia, Spain, Brazil, and the United States, developing both conceptual and technical versatility through diverse training environments. Currently, I am a Postdoctoral Fellow at Reed College, where I support undergraduate research and lead projects examining chemogenetic modulation of decision-making, astrocyte function in cognitive flexibility, and the behavioral effects of ketamine in animal models of psychiatric disorders. I am committed to ethical research practices, open science, and bridging experimental neuroscience with real-world clinical and societal challenges.

EDUCATION

University of Los Andes

Ph.D. in Psychology at Neuroscience and Behavior Laboratory, Bogotá, Colombia. *April 2023*

University of Los Andes

M.Sc. degree in psychology, at Neuroscience and Behavior Laboratory, Bogotá, Colombia. *November 2020*

University of San Buenaventura

M.Sc. degree in clinical Neuropsychology, Bogotá, Colombia. *September 2015*

University Pablo de Olavide.

M.Sc. in Neuroscience and Behavioral Biology, Seville, Spain. *March 2010*

Catholic University of Colombia

B.A. in Psychology, Bogotá, Colombia. *March 2007*

PUBLICATIONS

Lievano Parra, D., Garavito Coronado, J. D., Jensen, G., Gonzalez Diaz, V., & Cardenas Parra, F. (2026). Time-dependent changes in stepping performance and velocity following partial dopaminergic lesions in the SNc of male and female rats. *PloS one*, 21(5), e0337381. <https://doi.org/10.1371/journal.pone.0337381>

Cortés Silva, J. A., Davis, C. A., Lievano Parra, D., & González, V. V. (2026). Can aerobic exercise really improve decision-making in aging? What has been measured, what has been assumed, and what needs to change. *PsyArXiv*. Preprint.

Liévano-Parra, D. J. (2013). Neurobiología de la agresión: Aportes para la psicología. *Revista Vanguardia Psicológica Clínica Teórica y Práctica*, 4(1), 69–85.



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INTERNSHIPS

University of California, Los Angeles (UCLA).

Visiting Graduate Researcher. Brain and Research Institute, Izquierdo Lab. Mentored by Dr. Alicia Izquierdo Edler.

Reversal Learning in female and males Long-Evans rats undergone to chemogenetic inhibition of dorsomedial striatum and nucleus accumbens.

*Los Angeles, Cal.
September 2022 –
March 2023*

RESEARCH EXPERIENCE

Reed College

Postdoctoral Researcher, Gonzalez Lab, Department of Psychology.

As a postdoctoral fellow in the Gonzalez Lab, I support the development and implementation of senior thesis projects in behavioral neuroscience, while also conducting independent research using chemogenetics, behavioral assays, and rodent models of neuropsychiatric disorders. My current projects include:

- Investigating the effects of chemogenetic inhibition of the dorsomedial striatum (DMS) on decision-making under conditions of risk and information.
- Examining how chemogenetic inhibition of astrocytes in the anterior cingulate cortex (ACC) affects reversal learning.
- Exploring the effects of ketamine on risk-based decision-making in rats exposed to varying environmental and social enrichment protocols.

This role combines technical mentorship, experimental design, and translational inquiry, with an emphasis on open science and rigorous behavioral analysis.

*Portland, OR.
January 27 – to date*

University of Los Andes.

Doctoral Researcher.

Effects of early L-DOPA treatment on prepulse inhibition and reversal learning under uncertainty in male and female Wistar rats with unilateral induction of preformed fibrillar α -synuclein (α -syn PFF) and SynFib in the substantia nigra pars compacta

Research funded by the Banco de la República.

*Bogotá, September
2024 – to date*

University of Los Andes

Doctoral Research

Effects of the Unilateral Lesion of the Substantia Nigra Compacta with 6-OHDA on Reversal Learning and Prepulse Inhibition in Male and Female Wistar Rats.

*Bogotá, Col.
January 2018 –
January 2023*

University of Los Andes – University of San Buenaventura

Master's Research

Effects of chronic unpredictable mild stress on the expression of 5-HT_{2a} receptor in dorsal hippocampus and prelimbic cortex and the risk assessment behavior in Wistar rats.

*Bogotá, Col.
October 2012 – June
2015*



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CAREER-RELATED EXPERIENCE

Teaching Experience

Assistant professor

Faculty of Health Sciences, Universidad Manuela Beltrán, Bogotá, Colombia.

*January – December
2024*

Neuroscience — Undergraduate course, B.A. in Psychology.

Instructed an intermediate course on systems neuroscience, focusing on neural networks, sensory–motor integration, and behavioral correlates of brain function.

Neurolearning — Graduate course, M.Sc. in Neurorehabilitation.

Designed and delivered a graduate-level course exploring the neural mechanisms of learning and their application to rehabilitation and education. The course emphasized principles of neuroplasticity and translational approaches to optimizing learning outcomes.

Research Methods in clinical neurorehabilitation — Graduate course, M.Sc. in Neurorehabilitation.

Taught advanced research design, quantitative methodologies, and scientific writing. Supervised student projects from conceptualization to data analysis, promoting methodological rigor and ethical research practices in clinical settings.

Assessment and Instrument Design in Behavioral Neurology — Graduate course, M.Sc. in Neurorehabilitation.

Developed and taught modules on psychometric theory, scale construction, and validation of behavioral and cognitive assessment tools used in neurological settings.

Assistant professor

Psychology Department, University of Los Andes, Bogotá, Colombia.

*January 2019 –
December 2024*

Psychobiology — Undergraduate course, B.A. in Psychology.

Introduced undergraduate students to the biological bases of behavior, covering functional neuroanatomy, neurotransmission, and psychophysiological processes relevant to emotion and cognition.

What Is “Normal” in Mental Health? Sociocritical and Neuroscientific Debates on Mental Disorders — Faculty of Social Sciences, Interdisciplinary Undergraduate Seminar.

Designed and coordinated an interdisciplinary capstone course that interrogated the boundaries of normality and pathology in mental health through neuroscientific, sociocultural, and philosophical lenses.

Assistant professor

Neuropsychology Department, University of San Buenaventura, Bogotá, Colombia.

*August 2019 –
June 2021*



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Neurodevelopment — M.Sc. in Clinical Neuropsychology.
Comprehensive course on brain maturation and neurodevelopmental trajectories, integrating cognitive, clinical, and neurobiological perspectives on developmental disorders.

Neurobiology of Stress — M.Sc. in Clinical Neuropsychology.
Advanced seminar examining the neuroendocrine, cognitive, and behavioral dimensions of stress, with emphasis on translational and clinical implications.

Research Methods in Clinical Neuropsychology — M.Sc. in Clinical Neuropsychology.
Provided training in experimental design and data interpretation specific to clinical populations. Guided students in developing, conducting, and reporting empirical studies in neuropsychology.

Clinical Practice

Clinical Neuropsychologist

Department of Neurodegenerative Disorders, Instituto de Ortopedia Infantil Roosevelt, Bogotá, Colombia.

PROFESSIONAL AFFILIATIONS

- Society for Neuroscience (SfN)
- Colombian PhD's and researchers Society

AWARDS AND RECOGNITIONS

Ethical Research Recognition — *Asociación Colombiana para la Ciencia y Bienestar del Animal de Laboratorio (ACCBAL)* (Colombian Association for Laboratory Animal Science and Welfare), 2023, in recognition of outstanding commitment to responsible and ethical research involving laboratory animals, with emphasis on animal welfare and scientific integrity.

Research Grant — *Banco de la República (Colombia)*, September 2024

Recipient of competitive funding from the Banco de la República to support research on the effects of early L-dopa treatment in rodent models of Parkinson's disease.

PhD Scholarship — Vice-Rectorcy of Research and Creation, University of Los Andes.



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