

Laura N. Massó Quiñones

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EDUCATION

BS in Biology with emphasis in Biotechnology

2021-2024

University of Puerto Rico, Ponce (UPRP)

Cum Laude, GPA 3.6, Dean's List (All semesters)

RESEARCH EXPERIENCE

Neuroscience Postbaccalaureate Researcher

2024-2026

Washington University School of Medicine, St Louis

- Investigated the role of the nociceptin opioid peptide in the Dorsal Raphe Nucleus on nociceptive and motivated behaviors using a CRISPR Cas-9 approach.
- Perform stereotaxic surgery (e.g., viral injections) and fiber photometry implantation in rodent models.
- Design and conduct behavioral assays to assess motivation and pain sensitivity.
- Presented posters at multiple national and local conferences.
- Co-authored a perspective article about protein prediction software.

Undergraduate Researcher

2024

University of Puerto Rico, Ponce

- Investigated angiogenesis related to endometriosis using the Chick Chorioallantois Membrane (CAM) assay.
- Processed lysed ovarian tissue samples from rat models that were administered AMD3100, were implanted onto CAMs to assess blood vessel growth.
- Performed daily monitoring of eggs during incubation, documenting vascular changes compared to controls.
- Presented a poster at the University of Puerto Rico, Ponce Undergraduate Research Conference.

PRESENTATIONS

- “The role of the nociceptin opioid peptide in dorsal raphe nucleus on motivation,” *Work in Progress*, Biophotonics Research Center, Washington University School of Medicine, St. Louis, MO, October 23, 2025
- “The role of the nociceptin opioid peptide in dorsal raphe nucleus on pain and motivation,” *INSPIRE Conference*, Association of Black Biomedical Graduate Students, Washington University School of Medicine, St. Louis, MO, April 17, 2025

- “Here to Observe: Career Panel” *Here to Observe*, Planetary Science Division, Online, March 20, 2023

PUBLICATIONS AND POSTERS

- Braden, K., Trinagel, A., Acevedo, E., **Massó-Quiñones, L. N.**, Bernstein, A. E., Evans-Strong, A., Arguello, M., Dunn, S. S., & Castro, D. C. (2025). Dorsal Raphe Nucleus enkephalin peptide modulates behavioral preference. *Neuropsychopharmacology*. <https://doi.org/10.1038/s41386-026-02456-5>
- García-Reyes, R.A., **Massó Quiñones, L.N.**, Ruy, H. et al. Neuropsychopharmacology in the era of artificial intelligence and biomolecule prediction software. *NPP—Digit Psychiatry Neurosci* 3, 16 (2025). <https://doi.org/10.1038/s44277-025-00038-9>
- **Massó Quiñones L.**, Braden K., Castro D. (2025, November 17). *The role of the nociceptin opioid peptide in dorsal raphe nucleus on appetitive motivation*. [Poster presentation]. Society for Neuroscience Conference, San Diego, CA, United States.
- **Massó Quiñones L.**, Braden K., Castro D. (2025, November 6). *The role of the nociceptin opioid peptide in dorsal raphe nucleus on appetitive motivation*. [Poster presentation]. Neuroday Symposium, Institute for Translational Neuroscience St Louis University, St. Louis, MO, United States.
- **Massó Quiñones L.**, Braden K., Castro D. (2025, September 27). *The role of the nociceptin opioid peptide in dorsal raphe nucleus on appetitive motivation*. [Poster presentation]. St Louis Translational Pain Research forum, St. Louis, MO, United States.
- **Massó Quiñones L.**, Braden K., Castro D. (2025, May 24). *The role of the nociceptin opioid peptide in dorsal raphe nucleus on pain and motivation*. [Poster presentation]. MIR Research Symposium, Washington University School of Medicine, St. Louis, MO, United States.
- **Massó Quiñones L.**, Braden K., Castro D. (2025, March 28). *The role of the nociceptin opioid peptide in dorsal raphe nucleus on pain and motivation*. [Poster presentation]. MIR Imaging Retreat, Washington University School of Medicine, St. Louis, MO, United States.
- **Massó Quiñones L.**, Braden K., Castro D. (2025, March 20). *The role of the nociceptin opioid peptide in dorsal raphe nucleus on pain and motivation*. [Poster presentation]. Kappa Therapeutics Opioid Conference, University of Health, Sciences, and Pharmacy, St. Louis, MO, United States.
- **Massó Quiñones L.**, Torbio, Y., Colón M., Santiago S., Serrano V., Pagán, J. Suárez, E., Appleyard C., Ruíz A. (2024, May 9) *Targeting Angiogenesis: Investigating the therapeutic potential of AMID3100 in endometriosis* [Poster presentation]. Conferencia de investigación, University of Puerto Rico at Ponce, Ponce, Puerto Rico.

CLINICAL EXPERIENCE

Volunteer Medical Interpreter, Casa de Salud, St. Louis

2025-Present

- Provide interpretation services between healthcare providers and Hispanic patients during clinical consultations to ensure clear communication of medical histories, diagnoses, and treatment plans.

Child Life Volunteer, St. Louis Children's Hospital

2025-Present

- Support patients and families through play and activities.

STUDENT ASSOCIATIONS AND EXTRACURRICULARS

Member, American Medical Women's Association (AMWA) student organization

University of Puerto Rico at Ponce

2022-2024

- Regularly attended and participated in organization meetings, organization-led activities, and workshops and events.

Member, Medicine, Education, and Development to Low-Income Families Everywhere (MEDLIFE) student organization

University of Puerto Rico at Ponce

2022-2024

- Contributed to organization-led activities, while volunteering time and effort to support underprivileged communities through the organization.
- Recognized as a standout member in 2022 for exceptional commitment to the organization.

Paralympic swimmer

Puerto Rico Paralympic Committee

2022-2024

- Represented Puerto Rico as a Paralympic swimmer in the Citi Para Swimming World Series USA 2024 in Indianapolis and Minneapolis, the Jimi Flowers Classic at the United States Olympic and Paralympic Training Center, and the Para Pan-American Games Santiago 2023 in Chile.

Vice-president, "Student Coalition in Search of Equality (CEBE)"

University of Puerto Rico at Ponce

2021-2024

- Prepared and reviewed various documents including authorizations, letters, and emails.
- Delivered educational talks and presentations on LGBTQ+ issues to the student body.
- Collaborated with President and other members to plan and organize activities for upcoming semesters.

Student leader & member for "Here to Observe (H2O)"

A NASA Planetary Science Division Program.

2021-2023

University of Puerto Rico at Río Piedras

- Organized and led meetings for program participants.
- Prepared communication documents, such as emails.

- Collaborated with a team to organize a successful NASA career panel event and promoted the event.

SERVICE

Volunteer, Amazing Brain Carnival **2024-Present, 4 events**
St. Louis Science Center
Washington University School of Medicine
St Louis, Missouri

- Educate young children about neuroscience concepts through playful experiments and activities.

Volunteer, Young Scientist Training Program Tutor **Summer 2025**
Division of Biological and Biomedical Sciences
Washington University School of Medicine
St Louis, Missouri

- Met with the Young Scientist Program scholar on a daily basis.
- Helped the scholar understand neuroscience concepts or techniques relevant to their project.
- Assisted the scholar with their Writing Course materials and ensured their comprehension of scientific literature.

Volunteer, Scientific Outreach at Woodward Academy **February 13, 2025**
Initiative for Maximizing Student Development
Washington University School of Medicine
St Louis, Missouri

- Demonstrated scientific concepts through playful experiments, such as Strawberry DNA extractions, to grade school students.

Volunteer, Food Outreach **2024-**
2025 *St Louis, Missouri*

- Assist clients in the nutrition center by packing their grocery orders.
- Help cook, pack and freeze prepared meals for clients.

📅 **November 7, 2024**

University Internal Medicine & Diabetes Associates
Washington University School of Medicine
St. Louis, Missouri

- Facilitated a community health workshop to low-income seniors living in subsidized housing in North St Louis.

Volunteer, MEDLIFE (Medicine, Education, and Development for Low-Income Families Everywhere) **2022-2024**
University of Puerto Rico at Ponce

- Participated in multiple volunteer opportunities at local events.

- Worked collaboratively with other volunteers to provide aid and support to underprivileged communities locally.

SKILLS

- Proficient in laboratory techniques, including titrations, perfusions, brain slicing, stereotaxic surgery, microscopic imaging, extractions, and distillations; as well as behavioral assays that measure nociception, motivation and reward preference, anxiety, and locomotion; and the Chick Chorioallantois Membrane (CAM) assay.
- Proficient in Microsoft Office 365 applications, Observer and Ethovision, MatLab, and Adobe Illustrator.
- Languages: English, Spanish