

Amanda Anqueira-González, B.Sc.

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Education

University of Puerto Rico, Río Piedras Campus

Bachelor's Degree in Cellular and Molecular Biology

August 2016 –

May 2021

Columbia University

Doctoral Degree in Neurobiology and Behavior

August 2021-

Present

Research Experience

Undergraduate research: Behavioral Genetics Lab

June 2018 –

June 2021

Project title: Effect of synaptic gene BRP in alcohol related sleep behaviors

Advisor: Alfredo Ghezzi, Ph.D.

Objective: To understand the genetic interaction between alcohol and the circadian rhythm using the animal model, *Drosophila melanogaster*.

University of Puerto Rico, Río Piedras

Project title: The Molecular Mechanisms of Ethanol Neuroadaptation

Advisor: Alfredo Ghezzi, Ph.D.

Objective: To understand genetic and cellular components responsible for neuroadaptation to ethanol and its effects on learning and memory.

University of Puerto Rico, Río Piedras

Summer Undergraduate Research: Klann Lab

May 2019 –

August 2019

Project title: Investigating mitochondrial structure and function in the rare X-linked intellectual disability disorder, MEHMO Syndrome

Advisor: Eric Klann, Ph.D.

Objective: To uncover the role of the EIF2S3 gene frameshift mutation, responsible for the MEHMO Syndrome, on neuronal mitochondria structure and function.

New York University

Virtual Summer Undergraduate Experience: Princeton Neuroscience Institute

June 2020 –

July 2020

Advisor: Catherine J. Peña, PhD

Objective: To understand the neurobiological and epigenetic mechanisms underlying early life stress. To experience different branches within the Neuroscience field.

Princeton University

Research Funding

NIH BP-ENDURE Fellowship

NeuroID Research Program

April 2018 –

June 2020

- Two-year financial support from the National Institute of Health Blueprint Initiative “Enhancing Neuroscience Diversity through Undergraduate Research Education Experiences”

NIH-Research Initiative for Scientific Enhancement **August 2020-
June 2021**
RISE Research Program

- Financial support from the National Institute of Health Research Initiative for Scientific Enhancement at the University of Puerto Rico at Río Piedras

Leadership Experience

Neuropsychology Puerto Rico - Graduate School Panel **October 2022**
Invited Panelist | Columbia Neurobiology PhD Student

- Mentored students on how to excel in neuroscience research programs and graduate school applications.

Saturday Science **May 2022 –
Present**
Logistics and project guide | CUNO Spanish Programming VP

- Guide visiting community through theoretical concepts behind the nervous system using different interactive activities in Spanish and English language.
- Ensure representation of Spanish-speaking community in event.

Semillas del Triunfo Program | Ciencia PR **September 2022 –
Present**
Mentor | Program Chosen Mentor

- Mentorship of girl high school students in STEM projects of choice.

Columbia University SPURS Program - Graduate School Panel **July 2022**
Invited Panelist | Columbia Neurobiology PhD Student

- Mentored students on how to excel in virtual and in-person summer research programs, internship programs and graduate school applications and interviews.

Princeton Neuroscience Institute - Graduate School Panel **June 2022**
Invited Panelist | PNI Previous Intern

- Mentored students on how to excel in virtual and in-person summer research programs, internship programs and graduate school applications and interviews.

UCLA “Fostering Equity and Accountability in STEM Together” (FEAST) **May 2022**
Graphic Design | Columbia Neurobiology PhD Student

- Design of official FEAST UCLA logo.

Científico Latino - Graduate School Mentorship Initiative (GSMI) **October 2021 –
January 2022**
GSMI Mentor | Columbia Neurobiology PhD Student

- Mentorship of underrepresented graduate school applicants, proofreading and edition of application materials.

BioBus / Scientist on the Subway Collaborative School Visits	October 2021 – December 2021
Volunteer Scientist on the Subway Member	
<ul style="list-style-type: none"> ▪ Guide elementary school students through theoretical concepts behind the nervous system using different interactive activities. 	
Neuroscience High School Virtual Workshop	October 2020
Project guide Neuroboricuas Río Piedras Chapter Member	
<ul style="list-style-type: none"> ▪ Guided visiting community through theoretical concepts behind the nervous system using Backyard Brains equipment. 	
Science, Failure & Soul	November 2019- Present
Graphic Design SFS Graphic Designer	
<ul style="list-style-type: none"> ▪ Management of graphic art content within the Science, Failure & Soul Blog. 	
Importance of Science Outreach Seminar	June 2020
Logistics NNSA Committee Director	
<ul style="list-style-type: none"> ▪ Development and execution of full seminar detailing the impact and importance of science outreach in scientific development and society. 	
NNSA Online Activities	March 2020- July 2020
Logistics NNSA Committee Director	
<ul style="list-style-type: none"> ▪ Managed different NNSA social media platforms to increase NNSA presence and scientific communication during COVID-19 emergency. 	
Opportunities for Students Interested in the Sciences: Online Panel	April 2020
Logistics and project guide NNSA Committee Director	
<ul style="list-style-type: none"> ▪ Mentored students about undergraduate scientific career development during an online panel on long term scientific careers. 	
The Power of Women in Science and Neuroscience Interactive Exhibition Booth	March 2020
Logistics and project guide NNSA Committee Director	
<ul style="list-style-type: none"> ▪ Managed full preparation and logistics for an interactive exhibition booth focused on neuroscience and the power of women in STEM. ▪ Guided students through theoretical concepts behind the nervous system using interactive activities and games. 	
Explore your brain in the “Sanse”	January 2020
Volunteer	
<ul style="list-style-type: none"> ▪ Guided visiting community through theoretical concepts behind the nervous system using Backyard Brains equipment. 	

Sugar Brain

December 2019

Logistics | NNSA Committee Director

- Managed full design and logistics of neuroscience booth focused on explaining the neuroscience underlying sugar intake using interactive activities and games.

Neurotransmitters of Happiness

November 2019

Logistics | NNSA Committee Director

- Managed the logistics for a seminar focusing on the neurotransmitters responsible for the emotional behavior known as happiness.

How to be a successful applicant: Three Day Workshop

November 2019

Logistics | NNSA Committee Director

- Managed the logistics for a three-day workshop focusing on optimization of different areas of internship and graduate school applications.

Neurobiology of Addiction

November 2019

Logistics and project guide | NNSA Committee Director

- Co-managed the logistics for a high school seminar on the neurobiology of drug addiction.
- Guided high school students through theoretical concepts behind the nervous system and the neuropsychopharmacology of drug abuse using conference-based tools and interactive Backyard Brains equipment.

NNSA Neuroscience Interactive Booth

October 2019

Logistics and project guide | NNSA Committee Director

- Managed the design and logistics for a neuroscience interactive booth at a STEM fair held in the Arecibo Observatory's observation night.
- Guided visitors of various ages through theoretical concepts behind the nervous system using interactive activities and games.

Pre-scholar Neuroscience

September 2019

Logistics and project guide | NNSA Committee Director

- Guided Pre-School students through the concept of the neuron using interactive activities.

Bioethical conflicts in the Future of Humanity

April 2019

Logistics | NNSA Committee Recruiter Organizer and Visuals Coordinator

- Managed the design and logistics for a panel discussion with faculty members from the fields of Psychology, Environmental Sciences and Anthropology to discuss the implications of global warming on mental health and anthropocentrism.

Pre-scholar Neuroscience

March 2019

Logistics and project guide | NNSA Committee Recruiter Organizer and Visuals Coordinator

- Organized the logistics for a Pre-School neuroscience class session.
- Guided Pre-School students through the concept of the neuron using interactive activities.

Brain Games - Brain Awareness Week Booth	March 2019
Logistics and project guide NNSA Committee Recruiter Organizer and Visuals Coordinator	
<ul style="list-style-type: none"> ▪ Managed the design and logistics for a brain awareness week interactive booth. ▪ Guided students through theoretical concepts behind the nervous system using interactive activities and games. 	
Science Career Development Workshop	March 2019
Project Guide	
<ul style="list-style-type: none"> ▪ Guided middle school students through theoretical concepts behind neuroscience and offered mentoring in neuroscience careers. 	
Explore your brain in the “Sense”	January 2019
Volunteer	
<ul style="list-style-type: none"> ▪ Guided visiting community through theoretical concepts behind the nervous system using Backyard Brains equipment. 	
Bioethical conflicts in the Future of Humanity	November 2018
Logistics NNSA Committee Recruiter Organizer and Visuals Coordinator	
<ul style="list-style-type: none"> ▪ Managed the branding for a panel discussion with faculty members from the fields of Psychology, Biology, Medical Humanities and Philosophy to discuss the social implications of biotechnologies and the ethical concerns for the future. ▪ During the event, facilitated the flux of spectators by co-managing the registry. 	
Behavioral Genetics Lab Exposition	September 2018
Project guide	
<ul style="list-style-type: none"> ▪ Guided students through the theoretical concepts behind the Behavioral Genetics Lab. 	
NNSA Recruitment	September 2018
Logistics NNSA Committee Recruiter Organizer and Visuals Coordinator	
<ul style="list-style-type: none"> ▪ Managed the design and logistics of NNSA recruitment table. 	
Pre-scholar Chemistry	April 2018
Project guide	
<ul style="list-style-type: none"> ▪ Guided students through simple chemistry experiments. 	
Honors and Academic Awards	
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Columbia University Dean Diversity Fellowship	April 2021
Columbia Vagelos College of Physicians and Surgeons	
Best Poster Award – Neuroscience Category	November 2020
ABRCMS 2020: The Virtual Experience	
Best Poster Award	November 2020
Icahn School of Medicine at Mount Sinai’s Biomedical Research Symposium for Underrepresented Scholars	

Best Poster Award 7 th Annual ASBMB Research Symposium	October 2020
Rafael Carrión Foundation Scholarship Rafael Carrión Foundation	August 2020
Cooperative Rafael Carrión Jr. Scholarship Cooperative Rafael Carrión	February 2018 – October 2018
Dean's Honor List University of Puerto Rico Río Piedras	August 2017 – May 2021

Publications

Anqueira-González, A., Acevedo-Gonzalez, J. P., Montes-Mercado, A., Irizarry-Hernández, C., Fuenzalida-Uribe, N. L., & Ghezzi, A. (2021). Transcriptional correlates of chronic alcohol neuroadaptation in *Drosophila* larvae. *Frontiers in Behavioral Neuroscience*, 15.
<https://doi.org/10.3389/fnbeh.2021.768694>

Anqueira-González, A. (2021, November 15). *What's leaking? URMs, LGBTQ+ and People with Disabilities in STEM*. Distilled Periodical. Retrieved from <https://www.yaledistilled.com/post/what-s-leaking-urms-lgbtq-and-people-with-disabilities-in-stem>.

Abstracts

McGowan, J. C., Ladner, L. R., Shubeck, C. X., **Anqueira-González, A.**, LaGamma, C. T., Tapia, J., DeFrancesco, A., Yu, T., Kernie, S. G., Denny, C. A. (2022). Traumatic brain injury increases contextual fear generalization, which is paralleled by hippocampal memory trace dysfunction and can be decreased by (R,S)-ketamine administration. *American College of Neuropsychopharmacology*.

Presentations

Princeton Neuroscience Institute Intern Reunion Princeton Neuroscience Institute Invited Presenter Project: <i>Effects of Early Life Adversity in Social Touch Phenotypes</i>	June 2022
Oral Presentation at 28th Puerto Rico Neuroscience Conference Online Presentation Project: <i>The Molecular Mechanisms of Ethanol Neuroadaptation</i> .	December 2020
Poster at ABRCMS 2020: The Virtual Experience Online Presentation Project: <i>The Molecular Mechanisms of Ethanol Neuroadaptation</i> .	November 2020
Poster at Icahn School of Medicine at Mount Sinai's Biomedical Research Symposium for Underrepresented Scholars Online Presentation Project: <i>The Molecular Mechanisms of Ethanol Neuroadaptation</i> .	November 2020

<p>Oral Presentation at Neuromatch Conference Online Presentation Project: <i>The Molecular Mechanisms of Ethanol Neuroadaptation.</i></p>	<p>October 2020</p>
<p>Poster at 7th Annual ASBMB Research Symposium Online Presentation Project: <i>The Molecular Mechanisms of Ethanol Neuroadaptation.</i></p>	<p>October 2020</p>
<p>Oral Presentation at Virtual Leadership Alliance National Symposium Online Presentation Project: <i>The Molecular Mechanisms of Ethanol Neuroadaptation.</i></p>	<p>August 2020</p>
<p>Oral Presentation at Princeton Neuroscience Institute Summer Internship Program Research Blitz 2020 Online Presentation Project: <i>The Molecular Mechanisms of Ethanol Neuroadaptation.</i></p>	<p>July 2020</p>
<p>Oral Presentation at NeuroID Graduation Symposium Online Presentation Project: <i>The Molecular Mechanisms of Ethanol Neuroadaptation.</i></p>	<p>June 2020</p>
<p>Poster at 27th Puerto Rico Neuroscience Conference Central Caribbean University, Bayamón. Project: <i>The Molecular Mechanisms of Ethanol Neuroadaptation.</i></p>	<p>December 2019</p>
<p>Poster at 6th Annual ASBMB Research Symposium University of Puerto Rico, Río Piedras Campus, San Juan. Project: <i>Investigating mitochondrial structure and function in the rare X-linked intellectual disability disorder, MEHMO Syndrome.</i></p>	<p>November 2019</p>
<p>Poster at 2019 REU Symposium Westin Alexandria, Virginia. Project: <i>Investigating mitochondrial structure and function in the rare X-linked intellectual disability disorder, MEHMO Syndrome.</i></p>	<p>October 2019</p>
<p>Poster at Society for Neuroscience Annual Conference Hyatt Regency McCormick Place, Chicago. Project: <i>The Molecular Mechanisms of Ethanol Neuroadaptation.</i></p>	<p>October 2019</p>
<p>Poster at Society for Neuroscience Diversity Poster Session Hyatt Regency McCormick Place, Chicago. Project: <i>The Molecular Mechanisms of Ethanol Neuroadaptation.</i></p>	<p>October 2019</p>
<p>Oral Presentation at NeuroID Summer Internship Project Symposium University of Puerto Rico, Río Piedras Campus, San Juan. Project: <i>Investigating mitochondrial structure and function in the rare X-linked intellectual disability disorder, MEHMO Syndrome.</i></p>	<p>August 2019</p>

Oral Presentation NYU Center for Neural Science Summer Research Symposium New York University, New York. Project: <i>Investigating mitochondrial structure and function in the rare X-linked intellectual disability disorder, MEHMO Syndrome.</i>	July 2019
Poster presented at NYU's 6th Annual Summer Student Research Conference New York University, New York. Project: <i>Investigating mitochondrial structure and function in the rare X-linked intellectual disability disorder, MEHMO Syndrome.</i>	July 2019
Poster presented at 26th Puerto Rico Neuroscience Conference Pontifical Catholic University of Puerto Rico, Ponce. Project: <i>Effect of synaptic gene BRP in alcohol related sleep behaviors.</i>	December 2018
Poster at Society for Neuroscience Diversity Poster Session San Diego Convention Center, San Diego. Project: <i>Effect of synaptic gene BRP in alcohol related sleep behaviors.</i>	November 2018
Poster at the University of Puerto Rico 5th Undergraduate Research Meeting Verdanza Hotel, San Juan. Project: <i>Effect of synaptic gene BRP in alcohol related sleep behaviors.</i>	September 2018
Oral Presentation at NeuroID Summer Internship Project Symposium University of Puerto Rico, Río Piedras Campus, San Juan. Project: <i>Effect of synaptic gene BRP in alcohol related sleep behaviors.</i>	August 2018

Professional Development

Molecular and Cellular Neurobiology Teaching Assistant Columbia University <ul style="list-style-type: none"> ▪ Educative engagement on concepts of molecular and cellular neurobiology to undergraduate students. 	September 2022 – Present
Mentoring Up Workshop Series Zuckerman Institute, Columbia University <ul style="list-style-type: none"> ▪ One month workshop series aimed to develop skills for promoting good mentorship and professional relationships. 	March 2022 – April 2022
Using Teaching Skills in Research Presentations Columbia University <ul style="list-style-type: none"> ▪ One day workshop on improvement of science communication to the scientific public using traditional teaching techniques. 	November 2021
2021 YBDIC SciComm Series Online, Yale University <ul style="list-style-type: none"> ▪ Six-month workshop series on different formats of science education and communication 	February 2021 – June 2021

- Introduction to Python** **June 2019**
 Online, Princeton University
- One month introductory provided for Princeton Neuroscience Institute summer interns on the basics of python and its uses in the Neuroscience field.
- What's my story? Communicating Science Effectively** **May 2019**
 Trust for Science, Technology and Research
- One day workshop on storytelling as a technique to communicate science to the scientific and nonscientific public.
- Genome Browser Workshop** **April 2019**
 University of Puerto Rico, Río Piedras Campus
- Two day introductory on the application of the UCSC Genome Browser, a Web-based tool with access to genome sequence data.
- RNA-seq Analysis** **February 2019**
 University of Puerto Rico, Río Piedras Campus
- One day introductory on the application of programming language R to obtain quantitative data from molecular technique for next generation sequencing, RNA-seq.
- Backyard Brains Equipment Training** **January 2019**
 Institute of Neurobiology
- One day workshop on the use of Backyard Brains equipment for community outreach purposes.
- MIT Quantitative Methods Biology Workshop** **January 2019**
 Massachusetts Institute of Technology
- Intensive one-week introductory on the application of programming language MATLAB to obtain quantitative data from biological sources.
- Foldscope Instruments Paper Microscope Workshop** **December 2018**
 Center of the Estuary Program of the San Juan Bay
- One day workshop on the construction of a paper microscope for community outreach purposes.
- Genome Wide Characterization of Chromatin Accessibility Workshop** **September 2018**
 Molecular Sciences Research Building
- Three-day intensive workshop on the basics of chromatin changes in gene regulation to characterize epigenetic signatures.

Volunteer Staff

- XBio Dictionary** **July 2020**
- Translation of XBio Dictionary Biology concepts from English to Spanish language
- Aid in provisions collection center** **January 2020**
- Aid in the organization and recollection of provisions for Puerto Rican earthquake victims

Aid to elderly center

October 2017

- Aid in the general duties of elderly center “Hogar San José”

Professional Associations

Planning Committee Member

Columbia Access Neuroscience

August 2022 –
Present

Committee Member

Columbia’s Zuckerman Institute Trainee Advisory Committee (ZTAC)

May 2022 –
August 2022

Blog Writer and Editor

Scientist on the Subway

January 2022 –
Present

Executive Committee Member

NB&B Diversity Working Group

November 2021 –
Present

Executive Team Member / Spanish Programing Vice President

Columbia University Neuroscience Outreach (CUNO)

September 2021 –
Present

Student Member

Neuroboricuas Río Piedras Chapter

September 2020 –
May 2021

Committee Director / President

National Neuroscience Student Association (NNSA)

August 2019 –
August 2020

Committee Recruiter Organizer and Visuals Coordinator

National Neuroscience Student Association (NNSA)

September 2018 –
May 2019

Student Member

National Neuroscience Student Association (NNSA)

September 2018 –
May 2021

References

Wesley Grueber, Ph.D.
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