

Annabelle Flores-Bonilla

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Education

University of Massachusetts, Amherst, Massachusetts

Neuroscience and Behavior (NSB) Graduate Program.....(2020 – May 2026)

NIH-Postbaccalaureate Research Education Program (PREP).....(2019 – 2020)

Pontifical Catholic University of Puerto Rico, Ponce, Puerto Rico.....(2014 – 2019)

B.S. in Biology; Magna Cum Laude, Biology award.

Colegio Sagrado Corazón de Jesús, Ponce, Puerto Rico.....(2001 – 2014)

Awarded the High Honors, Outstanding Senior Graduate, Major's Medal awards.

Publications

Flores-Bonilla A, Akli S, Rajvanshi A, Milczarek A, and Richardson HN. A history of adolescent drinking increases myelination of axons within the corticotropin releasing factor-enriched subregion of the central amygdala in adult mice. *Manuscript in preparation, expected submission in 2026.*

Flores-Bonilla A, Akli S, Kagen L, De Oliveira B, Rajvanshi A, Amira N, and Richardson HN. Adolescent alcohol binge drinking induced long-lasting changes in the population of myelinating oligodendrocytes that differentiated prior to adolescence in male and female mice. *Manuscript in preparation, expected submission in 2026.*

Akli S, **Flores-Bonilla A**, Nouduri S, Scott S, and Richardson HN. Adolescent drinking causes loss of aspartoacylase-expressing oligodendrocytes and hypomyelination of anterior cingulate and corpus callosum axons in male mice, but not females. *Manuscript submitted to Neuroscience Journal on March 30th, 2026. BioRxiv: <https://doi.org/10.64898/2026.04.01.715654>*

Flores-Bonilla A, De Oliveira B, Silva-Gotay A, Lucier KW, and Richardson HN. (2021). Shortening time for access to alcohol drives up front-loading behavior, bringing consumption in male rats to the level of females. *Biology of Sex Differences. 12(51) <https://doi.org/10.1186/s13293-021-00395-y>*

Flores-Bonilla A and Richardson HN. (2020). Sex differences in the Neurobiology of Alcohol Use Disorder. *Alcohol Research: Current Reviews.40(2):04 <https://doi.org/10.35946/arcr.v40.2.04>*

Awards for Research Funding and Professional Development

Trainee Professional Development Award (TDPA) Society for Neuroscience.....(2024)
Awarded for the abstract titled *A history of adolescent drinking increases myelination of axons within the corticotropin releasing factor-enriched subregion of the central amygdala in adult mice*. Award for travel to the 2024 Society for Neuroscience Conference in Chicago, Illinois. Attended events for professional development training.

National Science Foundation (NSF) Graduate Research Fellowship Program.....(2020 – 2025)

NSF Award #1938059. *Targeting the sex differences in microglial activity and oligodendrocyte population in development of the Prefrontal Cortex and in response to an inflammatory challenge.* Fellowship funds graduate student for three years with an additional two years on reserve with available opportunities for networking and internship experiences.

Spaulding-Smith Fellowship University of Massachusetts, Amherst, MA.....(2020 – 2026)
Fellowship offered to graduate students who are in an underrepresented minority group in STEM that provide funding for two years.

Undergraduate Student Travel Award (fully-funded travel)(2018)
Awarded to attend the 2018 Biomedical Research Conference for Minority Students (ABRCMS) in Indianapolis, Indiana.

Research Skills

Transgenic colony management and rodent handling

- DNA extraction of fresh tissues
- Polymerase chain reaction (PCR) using a thermocycler
- Gel electrophoresis

Administration of alcohol in voluntary and involuntary access paradigms in rats and mice

- Drinking in the Dark (DID) paradigm in the home-cage
- Two-bottle choice preference
- Chronic Intermittent Ethanol vapor exposure (CIE)
- Operant Self-Administration using Med-PC[®] software

Administration of drugs via intraperitoneal and subcutaneous injection in rats and mice

Stress and Cognitive behavioral assays for recognition memory and spatial working memory

- Open Field test and analyses
- Object Location and Novel Object Recognition (OL-NOR) tasks and analyses
- Spontaneous alteration Y-maze task and analyses

Intracardiac perfusion surgery, whole brain extraction, and histological processing of brain tissue

- Fresh tissue dissection of the medial prefrontal cortex, forceps minor, hypothalamus, and whole hippocampus
- Processing brains for sectioning (flash-freezing using dry ice)
- Coronal sectioning on a sliding microtome
- Blood sampling through tail bleed procedure

Immunofluorescent histochemistry using specific antibodies for protein visualization in brain sections

- Double and triple immunofluorescent labeling histochemistry using commercially available antibodies

Confocal imaging using a fluorescent microscope and analyses using NIS Elements Software

- Confocal microscope imaging in a fluorescent microscope (CREST-V2, Nikon Instruments)
- Designing a General Analysis 3 workflow in NIS Elements for image processing and analysis

Gene expression measurements

- RNA extraction from frozen brain tissue
- Reverse transcription PCR
- Real-time PCR (q-RT PCR).

Statistical analyses and data visualization in GraphPad Prism

- Data wrangling, statistical analyses, and data visualization in R
- Scientific Graphic Design for research articles and presentations

Scientific discussion

- Protocol writing and standardization of laboratory procedures
- Scientific article writing, review, and discussion
- Presenting research (oral, poster, and in writing) to other scientists and the general public
- Science communication and outreach for the general public

Research Positions & Employment

Neuroscience & Behavior (NSB) Graduate Program PhD Research Assistantship (RA)

University of Massachusetts, Amherst, MA. Funded by NSF Award #1938059, Spaulding-Smith Fellowship, and NIH grant NIAAA R01AA024774.

Laboratory of Heather Richardson, Ph.D.....(Jun 2020 – May 2026)

- Submitted dissertation titled: Sex Differences in Myelin Remodeling Following Adolescent Alcohol Use.
- Conducted research on determining the effects of alcohol during adolescence on short-term and long-term object recognition memory and spatial working memory tasks, myelinogenesis, oligodendrocyte lineage populations, and corticotropin-releasing factor (CRF) peptide expression in frontotemporal and stress circuits in male and female mice using immunofluorescence and confocal imaging.
- Assessed the consequences of alcohol binge drinking and chronic intermittent ethanol vapors (CIE) on cognitive performance and *caspase-6* expression to study alcohol-mediated axonal degeneration in old (~20-month old) mice.

Gene and Genome Analysis Teaching Assistantship (TA)

University of Massachusetts, Amherst, MA. Funded by the UMass Department of Biology.

Worked under the mentorship of Tomas Maresca, Ph.D.....(Sep – Dec 2024)

- Prepared the materials and assisted in conducting laboratory class experiments using molecular methods (cloning, sequencing, immunocytochemistry, DNA transformation, PCR) *in vitro* using cultures of *E. coli*, immortalized transgenic *Drosophila melanogaster* (S2 cells), and HeLa cells.

Postbaccalaureate Research Education Program (PREP)

University of Massachusetts, Amherst, MA. Funded by NIH R25 GM086264 grant.

Laboratory of Heather N. Richardson, Ph.D.....(Jun 2019 – May 2020)

- Studied the sex differences in alcohol drinking behaviors in adult rats using operant conditioning.
- Investigated the role of microglial engulfment of myelin debris and apoptotic oligodendrocytes following alcohol drinking in the prefrontal cortex during adolescent development in mice.

Undergraduate Research Technician

Ponce Health Science University, Ponce, PR. Funded by NIH R15 15AT009915 grant.

Laboratory of Caroline Appleyard, Ph.D.....(Aug 2018 – May 2019)

- Researched the effects of exercise in the neuroprotective and neuroinflammatory factors in the hippocampus and hypothalamus in a rat model of endometriosis.
- Studied the role of astrocyte and microglia activation and morphology in endometriosis.

Summer Internship Program (SIP) in the Basic Science Institute (BSI) division

Johns Hopkins University School of Medicine, Baltimore, MD. Funded by NIH & by the Leadership Alliance Summer Research-Early Identification Program.

Laboratory of Patricia Janak, Ph.D.....(Jun 2018 – Aug 2018)

- Studied individual differences (Sign-Trackers vs Goal-Trackers rats) in reward-associated learning in rats using operant conditioning to sucrose reward.
- Researched the effects of the attribution of incentive salience on reward representation.

Puerto Rico Louis Stokes Alliance for Minority Participation (PR-LSAMP)

Ponce Health Sciences University, Ponce, PR. Funded by NSF.

Brain Core Laboratory. Mentor: Gladys Chompré, Ph.D.....(Jan 2018 – May 2018)

- Researched the role of long-chain ceramides in the development of depressive-like behavior in Sprague Dawley rats that consumed a high-fat diet.
- Studied the effects of high-fat diet consumption on microglial activation, pro-inflammatory cytokines formation, and sphingomyelinase activation using real time polymerase chain reaction (qPCR) from cDNA samples from the ventral hippocampus and the infralimbic prefrontal cortex.

Muller Laboratory. Mentor: Devin Mueller, Ph.D.....(Jan 2017 – Dec 2017)

- Researched the role of gonadal hormones in cocaine-seeking behavior in Sprague Dawley and Long Evans rats using the conditioned place preference paradigm.
- Studied the effects of inhibition of estradiol synthesis in both female and male rats in acquisition, consolidation, and extinction of cocaine-associated memories.
- Studied the role of astrocyte communication using gap junction blockade in the prefrontal cortex of male rats in retrieval of cocaine-associated memories.

Summer Medical and Research Training (UM-SMART)

University of Michigan School of Medicine, Ann Arbor, MI. Funded by NIH.

Laboratory of Donna Martin, M.D., Ph.D.....(Jun 2016 – Aug 2016)

- Researched the role of Chd7 protein in neuronal development of hearing, associated with hearing-loss using immunofluorescent histochemistry and confocal imaging in a rare genetic disease called CHARGE syndrome.
- Studied whether loss of Chd7 in a conditional knockout mice affected the neuronal population density in the vestibulocochlear nerve at embryonic days e12 and e17 using immunofluorescent histochemistry and confocal imaging.

Volunteer Undergraduate Research Assistant

Pontifical Catholic University of PR, Ponce, PR

Laboratory of Zaira Mateo, Ph.D.....(Aug 2015 – May 2016)

- Assisted in experiments that studies the effects of an acute exposure to sucralose to the epinephrine expression levels of the whole brain in the zebrafish.
- Organized and directed weekly journal clubs for undergraduate students interested in research.
- Provided science communication skills in English for Spanish-speaking students.

Summer Internship Program

Princeton Neuroscience Institute, Princeton, NJ

Laboratory of Carlos Brody, Ph.D.....(Jun 2015 – Aug 2015)

- Performed stereotaxic (craniotomy and duratomy) survival surgeries and administered retrograde tracers via nano injection in rats
- Researched the methodology to define the anterior-posterior borders of the posterior parietal cortex (PPC) in the Long Evans rat brain.
- Studied the distribution of afferent connections of different brain regions to establish the boundary between PPC and the primary somatosensory and secondary visual cortices.

Puerto Rico Biobank Data Assistant

Ponce Health Sciences University & Moffitt Cancer Center, Ponce, PR.....(Jun 2014 – July 2014)

- Assisted in archiving medical history data from patients that donated samples for research.

CEIBA AG-BIO Summer Camp

Biotechnology & Agro-biotechnology Research Center, Ponce, PR

CEIBA Laboratory.....(Jun 2013)

- Participated in intensive hands-on learning of research concepts, biotechnology procedures, and laboratory safety for one week.

Research and Scientific Presentations

Flores-Bonilla A “Sex Differences in Myelin Remodeling Following Adolescent Alcohol Use.” March 16th, 2026; *Invited talk at Weera Addiction Neuroscience Lab*. Tufts University, Medford, MA. *Oral Presentation*.

Akli S, **Flores-Bonilla A**, Nouduri S, Scott S, Senthikumar R, and Richardson HN. “Adolescent Drinking Disrupts Maturation of Late-Stage Oligodendroglia in Mice.” June 2025; *48th Annual Research Society in Alcohol Scientific Meeting 2025*. New Orleans, LA. *Poster Presentation*.

Flores-Bonilla A, Akli S, Senthikumar R, De Oliveira B, Rajvanshi A, Amira N, Richardson HN. “A history of adolescent drinking increases myelination of axons within the corticotropin releasing factor-enriched subregion of the central amygdala in adult mice.” *NSB Open House*, University of Massachusetts, Amherst, MA. March 2025; *Neurobiology/Neuroscience UMass Chan Medical School and UMass Amherst 2024 Fall Meetup*. University of Massachusetts, Amherst, MA. October 2024; *2024 Society for Neuroscience Conference*. Chicago, IL. October 2024; *IONs Distinguished Lecture and Poster Presentation*, Amherst, MA. May 2024. *Poster Presentations*.

Flores-Bonilla A. “Examination of the escalation of alcohol drinking and myelination of stress circuits after adolescent alcohol consumption” *Neuroscience and Behavior Seminar Series*, Old Chapel, University of Massachusetts, Amherst, MA. March 6th, 2024. *Oral Presentation*.

Flores-Bonilla A, Akli S, Senthikumar R, De Oliveira B, Rajvanshi A, Amira N, Richardson HN. “Determining how adolescent alcohol drinking alters corticotropin releasing factor (CRF) and axonal myelination in the central amygdala in adulthood in male and female mice.” *2023 Society for Neuroscience Conference*. Washington, D.C. November 2023; *2023 Initiative for Neuroscience Conference*. University of Massachusetts, Amherst, MA. November 2023. *Poster Presentations*.

Flores-Bonilla A. “The role of corticotropin-releasing factor in Alcohol Use Disorder.” *Hormones for Breakfast*, Life Sciences Laboratories, University of Massachusetts, Amherst, MA. April 12th, 2023. *Oral Presentation*.

Flores-Bonilla A. “The Fast-track to Addiction.” *Richardson-Peyton Winter 2023 Retreat*, Windham, VT. January 27th, 2023. *Oral Presentation*.

Flores-Bonilla A, Akli S, Senthikumar R, De Oliveira B, Rajvanshi A, Amira N, Richardson HN. “Phenotyping a Subpopulation of Cells in the Amygdala Affected by Alcohol Exposure.” *2023 Interdisciplinary Neuroscience Conference*. University of Massachusetts, Amherst, MA. May 2023; *Neurosciences 2022 Poster Conference*. University of Massachusetts, Amherst, MA. November 9th, 2022. *Poster Presentations*.

- Flores-Bonilla A.** “Sex Differences in Drinking Dynamics: Front-Loading is Key.” Roundtable panel discussion: “Front-loading your way to an AUD: the relationship between drinking rate, intoxication, and motivation to experience the subjective effects of alcohol.” *45th Annual Research Society in Alcohol Scientific Meeting 2022*, Hyatt Regency Orlando, Orlando, FL. June 26th, 2022. *Oral Presentation.*
- Flores-Bonilla A, Lu YL, Silva-Gotay A, and Richardson HN.** “Which population of CRF-expressing cells in the central amygdala are impacted by adolescent binge drinking?” *Initiative on Neuroscience 2021 Multidisciplinary Poster Conference*, University of Massachusetts, Amherst, MA. *Poster Presentation.*
- Flores-Bonilla A, De Oliveira B, Silva-Gotay A, Lucier K, and Richardson HN.** “Shortening Access Time to Alcohol Drives Up Front-Loading Behavior, Bringing Consumption in Male Rats to the Level of Females”. *44th Annual Research Society in Alcohol Scientific Meeting 2021*, Online. *Poster Presentation.*
- Flores-Bonilla A, Silva-Gotay A, Akli S, and Richardson HN.** “Manipulating Operant Parameters to Gain Insight into Sex Differences in Alcohol Drinking.” *43rd Annual Research Society in Alcohol Scientific Meeting 2020*, cancelled due to COVID-19 Pandemic. *Accepted poster.*
- Flores-Bonilla A, Silva-Gotay A, Akli S, and Richardson HN.** “Determining the Role of Microglia in Clearing Oligodendrocyte Debris during Adolescence.” *2019 Postbaccalaureate Research Education Program Poster Session*, University of Massachusetts, Amherst, MA. *Poster Presentation.*
- Flores-Bonilla A, Cruz ML, Appleyard C, and Chompré G.** “Astrocyte Activation is Increased in a Rat Endometriosis Model.” *2019 Experimental Biology*, Orange County Convention Center, Orlando, FL. *Poster Presentation. 2019 Ponce Research Institute 15th Annual Scientific Conference*, Ferial Complex Convention Center, Ponce, PR. *Oral Presentation.*
- Flores-Bonilla A, Chompré G, Appleyard C.** “Exercise increases the expression of estrogen receptor β in the hippocampus in an endometriosis rat model.” *26th Puerto Rico Neurosciences Conference 2018*, Pontifical Catholic University of Puerto Rico, Ponce, PR. *Oral Presentation.*
- Flores-Bonilla A, Sambolin L, Chompré G, Appleyard C, Porter J.** “High Fat Diet increases neutral sphingomyelinases in the rat brain.” *2018 Junior Technical Meeting and PR Interdisciplinary Scientific Meeting*, University of Turabo, Gurabo, PR. & *2018 XVI Scientific Investigations Symposium*, Pontifical Catholic University of PR, Ponce, PR. *Oral Presentation.*
- Flores-Bonilla A, Fraser KM, Keiflin R, Janak PH.** “Do Individual Differences in Incentive Salience Attribution Reflect Differences in Reward Representation?” *26th Puerto Rico Neurosciences Conference 2018*, Pontifical Catholic University of Puerto Rico, Ponce, PR; *2018 Annual Biomedical Research Conference for Minority Students (ABRCMS)*, Indiana Convention Center, Indianapolis, IN; *2018 National Science Foundation Hispanic Speaking Institutions Innovation Conference*, Mayagüez Resort and Casino, Mayagüez, PR; *2018 PR-LSAMP Advisory Board Meeting*, University of Puerto Rico, Río Piedras, PR; *2018 Leadership Alliance National Symposium (LANS)*, Hartford, CT; & *2018 Career, Academic, and Research Experiences for Students (CARES) Symposium*, Johns Hopkins University School of Medicine, Baltimore, MD. *Poster Presentations.*
- Flores-Bonilla A, Fitzgerald M, Santos B, Mueller D.** “Prefrontal Astrocytic communication and energy metabolism in retrieval of cocaine-associated memories.” *2017 XV Scientific Investigations Symposium*, Pontifical Catholic University of PR, Ponce, PR. *Oral Presentation.*

Flores-Bonilla A, Skidmore J, Martin D. August 2016. “The role of Chd7 in embryonic development of the CNS and cochlear ganglion.” *Medical Scientist Training Program Retreat*, Higgins Lake, MI. Oral Presentation.

Scientific Professional Associations

Society for Neuroscience.....(2023-Present)
Research Society on Alcohol.....(2020-Present)
Society for Advancement of Chicanos/Hispanics & Native Americans in Science.....(2019)
American Physiology Association.....(2019)
The Leadership Alliance.....(2018-2019)
Puerto Rico Louis Stokes Alliance for Minority Participation (PR-LSAMP).....(2017-2018)

Published Science Communication

Flores-Bonilla A. March 7th, 2022. “What is a post-bac? My experience in PREP”. *That’s Life Science*, University of Massachusetts, Amherst. https://thatlifescience.github.io/github_dev/2022-03-07-What-is-a-post-bac-my-experience-in-PREP/

Flores-Bonilla A. September 13th, 2021. “Quarantine Blues? The Effects of Social Isolation in the Brain”. *That’s Life Science*, University of Massachusetts, Amherst. https://thatlifescience.github.io/github_dev/2021-09-13-quarantine-blues-afloresbonilla/

Flores-Bonilla A, Rodríguez-Rivera J. September 5th, 2018. “Conditioned addiction? Pioneer participates in scientific research at Johns Hopkins University, in Maryland”. *Prints of the Future*, PUCPR. Spanish Language. <http://huellas.pucpr.edu/?p=32390>

Science Communication Leadership

The Paaaper People™

Bengaluru, India (via Zoom)

(Jan 2021-On hiatus)

An international Journal Club funded by K.S. Menon dedicated to make science and scientific literature accessible to everyone.

- *Sex Differences in Drinking Dynamics Journal Club*; oral presentation on June 15th, 2021
- *Stress and Social Isolation Journal Club*; oral presentation on February 27th, 2021

That’s Life Science Blog – now *Science Stories*

University of Massachusetts, Amherst, MA

A peer-reviewed open access journal founded by graduate students at the University.

President

(Aug 2022-May 2023)

- Expanded the recruitment of graduate student writers from more diverse pool of life-sciences fields at UMass including kinesiology, animal biotechnology, public health, environmental conservation, biomedical engineering, and epidemiology to submit short-form science articles and expand opportunities for science communication.
- Collaborated our efforts with Science Café and merged in 2023 to create *Science Stories*.

Managing Editors Committee

(Aug 2020-May 2023)

- Promoted to Chair in January 2022: managed the science article submissions and coordinated the email communication between the authors, the peer editors, and the managing editors.
- Edited articles before publication on the website.

- Attended, took notes, and contributed to discussion in the committee meetings.

Outreach Presentations

Flores-Bonilla A. February 16th, 2022. “My Scientific Journey” *Invited speaker for PREP Speaker Series: Scientists Tell Their Stories*. University of Massachusetts, Amherst, MA. (Presentation via Zoom).

Flores-Bonilla A. February 25th, 2021. “My experience at the University of Massachusetts, Amherst.” *Invited speaker for PR-LSAMP undergraduate students*, Pontifical Catholic University of Puerto Rico, Ponce, PR. (Presentation via Zoom).

Flores-Bonilla A, Edwards M, Otter K. January 27th, 2020. “Train your Friends” *Neuroscience and Behavior Educational Outreach Committee*, Holyoke High North Campus, Holyoke, MA.

Flores-Bonilla A, Edwards M, De la Rosa N. March 10th, 2020. “Train your Friends” *Neuroscience and Behavior Educational Outreach Committee*, Four Rivers Charter School at the University of Massachusetts, Amherst, MA.

Flores-Bonilla A. February 19th, 2019. “Experiences in Undergraduate Research” *General Biology Course for Undergraduates*, Pontifical Catholic University of Puerto Rico, Ponce, PR.

Flores-Bonilla A. November 9th, 2018. “Anatomy of the Brain” *Physiology (PhUN) week*, Pontifical Catholic University of Puerto Rico, Ponce, PR.

Mentoring Experience and Leadership

Spaulding-Smith Peer Mentor (2024-2025)
University of Massachusetts, Amherst, MA

- Served as a peer mentor for a first-year Spaulding-Smith graduate student.

McNair Scholars visit (2024)
University of Massachusetts, Amherst, MA

- Participated in the graduate student panel organized by the Office of Inclusion and Engagement for the undergraduate students in the McNair program to discuss our experiences as graduate students in a PhD program.

SPACE (Supporting Peer Academic Commitment and Excellence) Program (2024)
University of Massachusetts, Amherst, MA

- Participated in the department-led graduate student panel for the undergraduate students in the SPACE program to discuss our experiences as graduate students in a PhD program.

NSB Community and Social Coordinator (Jan–Dec 2024)
University of Massachusetts, Amherst, MA

- Organized student-only social activities to create space for community and networking in a relaxed environment.

NSB Chair of the Mentorship Committee (Jan–Dec 2024)
University of Massachusetts, Amherst, MA

- Developed strategies with the NSB Vice-President to coordinate mentor-mentee connections among NSB graduate students.

PREP Near Peer Mentor (Aug 2021-May 2024)
University of Massachusetts, Amherst, MA

- Helped current PREP students on a 1-on-1 consultations for their interest in applying for graduate schools, gave feedback on their writing in their application materials and provided resources to apply for fellowships.
- Participated in a panel discussion about choosing graduate programs and selecting the laboratory (or Principal Investigator) of interest.

NSF Graduate Research Fellowship Program (GRFP) Mentor (Aug 2021-Oct 2021)
Graduate School Office of Professional Development (OPD)
University of Massachusetts, Amherst, MA

- Selected to be an NSF GRFP Mentor after passing through a competitive application process.
- Received training focused on understanding the NSF GRFP Review Criteria.
- Evaluated student’s writing and provided constructive feedback on their application materials in 1-on-1 consultations.
- Co-facilitated an NSF GRFP OPD workshop for undergraduates and graduate students titled “NSF GRFP Graduate Research Plan Statement Workshop”

Student Mentors Project

Pontifical Catholic University of Puerto Rico, Ponce, PR
College of Science, Department of Biology (Jan 2017-Aug 2017)

- Aided incoming students about their transition and adaptation to life in university.
- Provided guidance on the student’s enrollment in the department of biology, biotechnology, chemistry, and mathematics on their first day at the Ponce campus.

Awards for Scholastic Performance

Baccalaureate Science in Biology Award.....(2019)
Awarded to the student with the graduating class’s highest grade point average (GPA) in the Pontifical Catholic University of PR.

President’s Award.....(2016-2019)
Awarded to the top 100 students with the highest GPA the Pontifical Catholic University of PR.

College of Science Honor Assembly Certificate for Academic Excellence.....(2016-2019)
Awarded to the top students with the highest GPA in the College of Science at the Pontifical Catholic University of PR.

Development Scholarship Fund for Academic Excellence.....(2017)
Yearly award to a single student at the Pontifical Catholic University of PR for their academic achievements.

Ponce Mayor’s Medal.....(2014)
One student per high school graduating class is awarded an educational student trip to Washington DC, Philadelphia, and New York for their educational, social, and community achievements. Award is sponsored by Autonomous Municipality of Ponce & María E. Meléndez Altieri.

Outstanding Senior Graduate Award.....(2014)
Awarded from National Honor Society at the Sacred Heart of Jesus Catholic School, Ponce, PR

High Honor Award(2014)

Awarded in recognition of Outstanding Academic Achievement and Leadership at the Sacred Heart of Jesus Catholic School, Ponce, PR.

Third Highest GPA Award.....(2014)
Awarded to the student with the graduating class’s third highest grade point average (GPA) in the 2014 graduating class at the Sacred Heart of Jesus Catholic School, Ponce, PR.

Certificates

University of Massachusetts Amherst, Amherst, MA

Aseptic Surgery.....(2019-2028)
Biomedical Responsible Conduct of Research.....(2020-present)
Post-Procedure Care of Mice and Rats in Research.....(2019-2028)
Working with the IACUC for Investigators, Staff and Students.....(2019-2028)
PHS Financial Conflict of Interest Course.....(2019-2029)
Working with Rats in Research Settings.....(2019-2028)
Working with Mice in Research Settings.....(2019-2028)
Fire Safety and Hazard Communication.....(2019-2028)
Laboratory Safety Training course.....(2019-2026)
Biolaboratory Safety Training course(2019-2026)
Animal Training course.....(2019)

Ponce Health Sciences University, Ponce, PR

Animal Care and Use (ACU) Student working with Animals course.....(2019)
Working with Rats in Research Settings course.....(2019)
II Neuroscience of Learning Symposium.....(2017)
Zoonoses and Small Laboratory Animal Safety and Wet Lab.....(2016)

Johns Hopkins University, Baltimore, MD

Animal Care and Use course.....(2018)
Chemical Waste Management course.....(2018)
Conflict of Interest and Commitment course.....(2018)
Electric Information Security and Data Management course.....(2018)
Fire Safety and Hazard Communication course.....(2018)
Preparing for an Active Shooter in the Clinical and Non-Clinical Environment.....(2018)
Laboratory Safety Preparatory Course.....(2018)
Patient Privacy for Workforce Members course.....(2018)

iBiology Courses Online Course.....(2017)
Obtained the Honor Certificate of Completion in Planning Your Scientific Journey course.

Pontifical Catholic University of PR, Ponce, PR

Participated in the Individual Development Plan Workshop.....(2017)
Participated in the Building a Presentation Poster Workshop.....(2017)
Participated in the Research Ethics Workshop.....(2017)
Participated in the Immunohistochemistry Workshop.....(2017)
Participated in the Laboratory Safety Workshop.....(2016-2017)
Participated in the Bridge to Neuroscience Workshop.....(2015)

University of Michigan, Ann Arbor, MI

Fulfilled the mandatory HIPAA requirement.....(2016)

Princeton Neuroscience Institute, Princeton University, Princeton, NJ

Completed the Aseptic Technique for Rodent Survival Surgery course.....(2015)
Completed the Pain Management in Laboratory Animals course.....(2015)
Completed the Working with the Laboratory Rat course.....(2015)

Student Associations

NSB Community and Social Coordinator.....(2024)
NSB Chair of the Mentorship Committee.....(2024)
Life Science Café.....(2023)
That’s Life Science.....(2019-2023)
Neuroscience and Behavior Outreach.....(2019-2020)
American Medical Student Association.....(2016-2018)
Student Society of Environmental Sciences.....(2015-2016)
Literary Circle of Revolution of Expression.....(2014-2016)
National Honor Society.....(2012-2014)

Languages

- Spanish (native speaking, reading, and writing)
- English (bilingual speaking, reading, and writing)

References

Heather N. Richardson, Ph.D. Professor of Psychological and Brain Sciences, University of Massachusetts Amherst.

Contact: hrichardson@cns.umass.edu

Elena Vazey, Ph.D. Associate Professor of Biology, University of Massachusetts Amherst.

Contact: evazey@umass.edu

Ilia Karatsoreos, Ph.D. Professor of Professor and Department Chair of Psychological and Brain Sciences, University of Massachusetts Amherst.

Contact: ikaratsoreos@umass.edu

Shelly Peyton, Ph.D. Professor of Biomedical Engineering and Chemical and Biological Engineering, Tufts University

Contact: shelly.peyton@tufts.edu