

# Glen Wickersham García

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## Education

**Universidad del Sagrado Corazón**, San Juan, PR

expected graduation date 5/2024

B.S. in Biotechnology, minor in Neuroscience

**GPA: 3.85 | Relevant Coursework, Licenses and Certifications:** Organic Chemistry I/II, Genetics, Microbiology, Cell Culture Techniques, Computational Statistics, Inorganic Chemistry, DNA Recombinant Techniques, Bioinformatics

## Work Experience

**NEURO-ID Research Scientist**, NIH U. of PR Rio Piedras Campus - San Juan, PR

**9/2021 – Present**

**Duties, Accomplishments and Related Skills:**

**Hours per week: 20**

- Worked on identifying putative neurotrophic factors involved in regeneration of ectoneural system in *H. glaberrima*
- Presented at the Criias 7<sup>th</sup> Encounter 2022, San Juan, PR, Society for Neuroscience Conference 2022 at San Diego, CA, and the Puerto Rico Neuroscience Conference 2022, at Ponce, PR
- Aided in qrt-PCR to validate transfection of neuroglial cells in the radial nerve cords of the echinoderm for pRNAs involved in innervation, as well as immunostaining of the Radial Nerve Cords.
- Working on identifying function association and localization of putative neurotrophic factors and axonal outgrowth location with prediction models
- Related skills: Expansion Microscopy, counseling, writing manuscripts, immunostaining, CNN, Generative Adverse Networks, UNIPROT, sea cucumber dissection and maintenance, Fluorescence Microscopy, In silico PCR, MEGAx and Multiple Sequence Alignment

**Undergraduate Research Fellow**, Massachusetts Institute of Technology

**5/2023 – Present**

**Duties, Accomplishments and Related Skills:**

**Hours per week: 40**

- Worked on testing Working Memory and Associative Memory with *C. elegans*, computational analysis of voltage-channel and Gcamp data, and optimization of the measurement of Gcamp8
- Attended the Investment Climate's Impact on Biotechnology in Cambridge, the Cortical Neurocircuits Symposium at MIT and the Boston Mammalian Synthetic Biology Symposium
- Preparing the poster for the MSRP Biology and Neuroscience Symposium
- Related skills: Serial Cloner, *C. elegans* growth and maintenance, ITK-SNAP, Nikon software, writing protocols for research, NSF-GRFP grant writing skills, 3D resin liquid printing, Machine Learning with Deep Mind and MATLAB, Confocal Microscopy

**Lance Corporal**, United States Marine Corps - Guaynabo, PR

**3/2021 – Present**

**Duties, Accomplishments and Related Skills:**

**Hours per week: 5**

- Experience in admin work, excel document preparation, inventories for equipment, hiking
- Part of the Ball committee decoration planner
- Related skills: marching

**Laboratory Assistant**, University of the Sacred Heart - San Juan, PR

**1/2022 – 5/2023**

**Duties, Accomplishments and Related Skills:**

**Hours per week: 15**

- Assist in protocol and reagent preparations for Organic Chemistry, Analytical Chemistry, Microbiology and Genetics student laboratories in the University of the Sacred Heart

- Assist in supervising laboratory classes and preparation of inventories
- Related skills: Project design, laboratory, and inventory organization

**Undergraduate Research Fellow**, UT Southwestern Medical Center - Dallas, TX

**6/2022 - 8/2022**

**Duties, Accomplishments and Related Skills:**

**Hours per week: 40**

- Work on project design of a gene therapy vector to reduce degeneration of photoreceptors caused by inherited mutations and Restrictive Digest Cloning
- Characterization of a novel mouse model of inducible and controllable retinal degeneration
- Networking within the university with faculty and students
- Miniproject in Dr. Douglas' laboratory: Helped design and complete experiment measuring rates of mitochondrial respiration using Seahorse in *C. elegans*
- Attended and presented a poster at the Annual Research Symposium SURF at UT Southwestern
- Attended the BioNTX, UTSW Chess Club and the NIH Career Fair
- Related skills: Maxiprep, SnapGene, Genotyping, *C. elegans* growth and maintenance, Mouse handling, HEK293 T cell passaging, Graphpad Prism, ImageJ, Networking, Seahorse

**Undergraduate Science Mentor I.S.S.S.**, University of the Sacred Heart – San Juan, PR

**8/2022 – 3/2023**

**Duties, Accomplishments and Related Skills:**

**Hours per week: 10**

- Participate in seminars and workshops to help undergraduate peers learn how to read papers, personal statements, and form posters
- Aid in building the mentorship program for professional scientific and academic/medical presentations
- Related skills: Project management, counseling, networking, Microsoft PowerPoint, and Excel

**STEM Tutor**, PAE University of the Sacred Heart - San Juan, PR

**8/2021 - 5/2022**

**Duties, Accomplishments and Related Skills:**

**Hours per week: 20**

- Provided tutoring assistance to undergraduate students in the following topics: Organic Chemistry I, General Biology I and II, General Chemistry I and II, Management Statistics, Calculus I, Microbiology, Genetics, Spanish and English
- Provided networking assistance to undergraduate students interested in STEM
- Related skills: Teaching, report writing, counseling

**Research Mentor**, University of the Sacred Heart – San Juan, PR

**9/2021 – 12/2021**

**Duties, Accomplishments and Related Skills:**

**Hours per week: 15**

- Measurement with galvanometer of electro-voltaic energy stored in mud from distinct terrains in Puerto Rico
- Research background on the enzymes contributing to the processes

### Conference Presentations

“Photoreceptor Degeneration in a Novel Mouse Model with Overexpression of a Human Gene Involved in Macular Degeneration”, Wickersham GMA, Nettesheim ER, Rowe AR, Wert KW.

08/08/2022, Annual Research Symposium at UT Southwestern in Dallas, TX.

“Identification of neurotrophic factors and their putative receptors in the sea cucumber *H. glaberrima*”, Wickersham Glen, Kiana, Emil, Arraras JE.

10/28/2022, Crias 7th Encounter at the University of Puerto Rico, Rio Piedras Campus in San Juan, PR.

“Identification of neurotrophic factors and their putative receptors in the sea cucumber *H. glaberrima*”, Wickersham GMA, Kiana, Emil, Arraras JE.

11/12/2022, ENDURE Poster Presentation Society for Neuroscience Conference in San Diego, CA.

“Identification of neurotrophic factors and their putative receptors in the sea cucumber *H. glaberrima*”, Wickersham GMA, Kiana, Emil, Arraras JE.

12/03/2022 in the Puerto Rico Neuroscience Conference hosted by PUCPR in Ponce, PR.

“Overexpression of PRDM13 Leads to Photoreceptor Degeneration in a Novel, Inducible Murine Model”, Nettesheim ER, Rowe AR, Cepica T, Yee T, Alshaikhsalama A, Wickersham GMA, Mahajan V, Small K, Wert KW.

04/25/2023, Annual Meeting of The Association for Research in Vision and Ophthalmology, New Orleans, LA.

“Learning and Whole Brain Imaging in *C. elegans*”, Wickersham GMA, Zheng C, Swaddipong D, Powell Z, Kagias K, Boyden E. 08/10/2023, Brain and Cognitive Sciences MSRP Symposium

### **Publications**

“Overexpression of PRDM13 Leads to Photoreceptor Degeneration in a Novel, Inducible Murine Model”, Nettesheim ER, Rowe AR, Cepica T, Yee T, Alshaikhsalama A, Wickersham GMA, Mahajan V, Small K, Wert KW.

06/2023, Investigative Ophthalmology and Visual Science Arvo Journal

### **Certifications**

*Working with Mice in Research Settings* – certified by CITI Program 02/22

*Fundamentals of Immunology: Innate Immunity and B-Cell Function* – certified by Coursera on 08/21

*Programming Foundations with JavaScript, HTML and CSS* – certified by Coursera on 07/21

*Conflicts of Interest* – certified by CITI Program on 06/20

*Students and Instructors* – certified by CITI Program on 06/20

*IRB Administration* – certified by CITI Program on 04/22

*Biomedical Responsible Conduct of Research* – certified by CITI Program on 03/22

*DojoExplore class (VC Knowledge)* – certified by Nucleate Dojo on 12/22

*Quantitative Methods Workshop* – certified by MIT on 01/23

*MATLAB Machine Learning Onramp* – certified by Mathworks on 07/23

*MATLAB Deep Learning Onramp* – certified by Mathworks on 07/23

### **Affiliations**

Society of Student Oriented Academic Research – Member (03/21), Secretary (09/21), President (08/22)

National Neuroscience Student Association – Member (08/22)

American Chemical Society Student Chapter – Member (09/2021), Vocal (01/22), Vice-president (08/22)

American Society for Biochemistry and Molecular Biology – Member (03/21)

Microbiology Student Chapter at the USC – Member (08/21), Vocal (08/22)

Nucleate Dojo – Member (07/2022)

### **Awards**

Montgomery G.I. Bill Selected Reserves (08/2023)

NIH BP-ENDURE Research Fellowship (08/2023)

Columbia Access Neuroscience (03/2023)

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Columbia Access Neuroscience (03/2022)  
CEPR Estudiantes con Talento Académico (01/2022)  
ISSS Research Fellow Award (12/2021)  
Honor Incentive Award (01/2021)  
Honor Incentive Award (01/2020)  
MVS Elks Scholarship Award (08/2019)