

Current Faculty Position

Assistant Professor of Neuroscience

January 2025 – Present

Nova Southeastern University (NSU), Department of Psychology & Neuroscience

Ft. Lauderdale, FL

- Teaching Neuroscience courses to undergraduate students utilizing active-learning and hands-on labs to reinforce and enhance learning outcomes.
- Pursuing active research projects in partnership lab with Dr. Ken Dawson-Scully.
Overall theme: neuropharmacological modeling, screening, and optimization of drug delivery methods, therapeutics, and targets using computational, *in vitro*, and *in vivo* models.
- Establishing research funding through departmental, collegiate, and external collaborations.
- Developing graduate neuroscience programs both at master's and doctoral levels to offer competitive internal and external candidates.

Current Research Position

Postdoctoral Research Fellow: Drug Development in Parkinson's Disease

July 2023 – Present

Karolinska Institute (KI), Department of Clinical Neuroscience

Stockholm, Sweden

- Working under Dr. Per Svenningsson in the Section of Translational Pharmacology.
- Overall theme: neuropharmacological modeling, screening, and optimization of drug delivery methods, therapeutics, and targets using computational, *in vitro*, and *in vivo* models.
- Performed *in vitro* assays such as viral transfections to test receptor mutants, cell viability in drug response assays, and G-Protein recruitment and binding determination.
- Developed novel PD therapeutic candidates and worked to modify, optimize, and repurpose existing drugs for PD.
- Promoted collaborative relationships between the LeBlanc Lab at the University of Miami and KAW consortium labs in Sweden which included the Carlsson Lab, Larhammar Lab, and the Delemotte Lab.
- Year 1 Funding: KAW Consortium Grant under the Wallenberg Foundation
- Year 2 Funding: Wenner-Gren Foundation Postdoctoral Scholarship (*Independent Funding Grant)

Education

International Max Planck Research School for Synapses and Circuits

August 2021 – May 2023

Max Planck Florida Institute for Neuroscience (MPFI)

Jupiter, FL

Doctorate in Integrative Biology-Neuroscience

August 2018 – May 2023

Florida Atlantic University (FAU)

Boca Raton, FL

Title of Dissertation: Using Electroshock to Probe Mechanisms of Herbicide Neurotoxicity and Novel Neuroprotective Compounds in *Caenorhabditis elegans* and *Drosophila melanogaster*

Defense Date: February 8th, 2023

GPA: 4.00

Master of Science in Biological Sciences

August 2018 – December 2020

Florida Atlantic University (FAU)

Boca Raton, FL

GPA: 4.00

Bachelor of Science in Biology with a Minor in Chemistry

August 2013 - May 2017

Nova Southeastern University (NSU)

Ft. Lauderdale, FL

GPA: 3.76

Publications

Simonson, A., **Naraine, A.**, Maki, S., Nugent, K., Lepore, S., & Dawson-Scully, K. (2024). Resveratrol natural product inspired compound as a potent neuroprotectant against acute oxidative stress. *microPublication biology*, 2024, 10.17912/micropub.biology.001127. <https://doi.org/10.17912/micropub.biology.001127>

Stilley, S. E.[#], **Naraine, A. S.[#]**, Yadavalli, K. P., Maki, S. L., Jutte, E. M., Kahn, J. M., Surtel, A. A., Lepore, S. D., & Dawson-Scully, K. (2023). Bridged Bicyclic Compounds: Comprehending a Novel Compound Class as Potential Anti-Epileptic Agents. *Epilepsia*. 2023; 00:1–10. <https://doi.org/10.1111/epi.17769>

Naraine, A. S., Aker, R., Sweeney, I., Kalvey, M., Surtel, A., Shanbhag, V., & Dawson-Scully, K. (2022). Roundup and glyphosate's impact on GABA to elicit extended proconvulsant behavior in *Caenorhabditis elegans*. *Scientific Reports*, 12(1), 1-11.

▪ **Press Release:** FAU and NSU issued press releases on this work. The research article was subsequently covered by over 110 news outlets around the world, of note were stories done by The Independent and The Daily Mail in the UK.

Suthakaran, N., Brock, T., **Naraine, A.**, Gonzalez-Lerma, P., Hopkins, C., & Dawson-Scully, K. (2022). Atropine reduces aldicarb-induced sensitivity to *C. elegans* electroshock model. *microPublication Biology*, 2022.

Previous Research Positions

Doctoral Candidate: Invertebrate Neurotoxicity

August 2018 – May 2023

Florida Atlantic University (FAU) & Max Planck Florida Institute for Neuroscience (MPFI)

Jupiter, Florida

- Worked under Dr. Ken Dawson-Scully.
- Overall theme: neuropharmacological and toxicological screening in invertebrate models
- Performed electroshock seizure assay on *C. elegans* exposed to various glyphosate-based herbicides.
- Perform intracellular electrophysiology on *D. melanogaster* larvae.
- Investigated various repurposed and novel neuroprotective drug candidates and their effect in invertebrate neurological models.
- Trained and mentored graduate and undergraduate students as part of research team.

Postbaccalaureate Fellow: Vascular Dementia

August 2017 – July 2018

NIH: National Institute on Aging

Baltimore, MD

- Worked under Drs. Rebecca McPherson, Kenneth Fischbein and Olga Fedorova.
- Performed MRI scans on 3, 6, 9, and 12-month-old mice and rats.
- Used Paravision 5 and 6 software to run novel scans on 7-Tesla Bruker horizontal MRI.
- Segmented 13 major brain regions as well as major cerebral blood vessels using AMIRA and Vivoquant software.

Research Intern: Chemotherapeutic Toxicity

June 2017 – August 2017

MD Anderson Cancer Center

Houston, TX

- Worked under Drs. David Tweardy and Prema Robinson.
- Analyzed 3 potential biomarkers for substance-P induced doxorubicin associated cardiotoxicity.
- Performed Western Blots and assisted in cell culture of two cardiomyocyte cell line H9C2 and HL-1.

Research Assistant: Behavioral Neurogenetics

August 2016 – May 2017

Nova Southeastern University (NSU)

Ft. Lauderdale, FL

- Worked under Dr. Jaime Tartar.
- Investigated a single nucleotide polymorphism rs6313 and potential effects of genotype on stress response.
- Used quantitative polymerase chain reaction to perform N-point analyses.

Research Assistant: Organic Synthesis

August 2015 – May 2016

Nova Southeastern University (NSU)

Ft. Lauderdale, FL

- Worked under Dr. Venkatesh Shanbhag.
- Developed novel Isatin-type compounds and Bis-Chalcones with potential antibiotic and antitumor properties.
- Received, as part of a team, the President's Faculty Research and Development Grant for a project pertaining to Hybrid Antibacterial Agents based on excellence in research and scholarship.

Assistant Researcher: Behavioral Neuroscience

June 2016 – July 2016

Georgetown University in collaboration with Nova Southeastern University (NSU)

Ft. Lauderdale, FL

- Worked under Dr. Stephen Wright.
- Scored Dahl salt-sensitive rats' performances on the Novel Object Recognition Test (NORT).

Previous Teaching Experience

Adjunct Faculty: Senior Seminar in Behavioral Neuroscience

Spring 2024

Nova Southeastern University (NSU)

Ft. Lauderdale, FL

- Highlighted influential research articles in a seminar course for senior undergraduate students in Neuroscience majors.
- Chose articles which captured hypotheses and methods in cellular neuroscience, sensory systems, imaging, behavior, clinical trials, and theoretical perspectives.
- Weekly forums challenged students to engage critically with articles while working towards their own group defense of a recent article of their choice.
- Performed an educational podcast-style interview for students with a leading social psychologist on her paper which would be the subject of discussion in the class.
- Promoted thoughtful discussion and analysis of the papers and authors by critiquing written summaries and providing broader perspectives on cutting-edge methods.

Adjunct Faculty: Independent Study in Neuroscience

Spring 2023

Nova Southeastern University (NSU)

Ft. Lauderdale, FL

- Mentored and instructed 7 undergraduate students in Neuroscience research projects.
- Trained students to perform electroshock seizure assay on *C. elegans* and video analysis of the assay.
- Evaluated student record keeping by a lab notebook.
- Students participated on a number of research projects involving screening neuromodulatory drug candidates with implications in the fields of neurotoxicology, data science, and neuro-oncology.
- Students also had to present in weekly lab meetings on recent papers on their projects to grow their scientific communication skills and familiarity with scientific literature.

Adjunct Faculty: Introduction to Neuroscience

Fall 2022

Nova Southeastern University (NSU)

Ft. Lauderdale, FL

- Taught an introductory neuroscience course to undergraduate students.
- Used wet laboratory experiences to provide exposure to a variety of techniques including EEG, ELISA, DNA extraction, electrophysiology, and PCR.
- Evaluated student record keeping by a lab notebook.
- Wrote weekly quizzes and midterm exams over a variety of essential neuroscience topics.
- Collaborated with senior faculty in developing and improving course material including establishing a workshop for scientific writing and a new “Neurotoxicity and Model Organisms” lecture.

Adjunct Faculty: Neurophysiology (RI)

Spring 2022 & Spring 2023

Florida Atlantic University (FAU)

Boca Raton, FL

- Taught a research-intensive course to graduate and undergraduate students.
- Used wet laboratory experiences to provide a practical understanding of electrical properties of neurons and their signaling.
- Assessed student’s understanding of concepts and writing ability via modular reports in the format of a scientific journal article.
- Facilitated student engagement with invertebrate models, particularly earthworms and crickets.
- Mentored students in using concepts such as threshold, conduction velocity, temperature (Q10), earthworm dissection technique, etc. to design an experiment to answer their own unique research question.

Instructor of Record: Anatomy & Physiology I & II Labs

Fall 2020 – Fall 2021

Florida Atlantic University (FAU)

Boca Raton, FL

- Created virtual, hybrid, and in-person workflows and assignment standards for all undergraduate labs during the covid-19 pandemic.
- Advised on standard operating procedures for students and teaching assistants for return to in-person labs.
- Mentored teaching assistants on online vs. in-person teaching techniques and served as an advisor to any professional or personal challenges they encountered.
- Mediated student complaints between teaching assistants, students, the lab coordinator, and department chair.
- Assisted in implementing new learning standards, online tools, and assessments in Fall 2021.
- Facilitated communication with student success services for athletes, students with accommodations, students struggling with their mental health, and students potentially exposed to the covid-19 virus.

Teaching Assistant: Anatomy & Physiology I & II Labs

August 2018 – December 2022

Florida Atlantic University (FAU)

Boca Raton, FL

- Independently lectured and led lab activities for first and second semesters of undergraduate level Anatomy and Physiology I and II lab courses. This was my TA Position when not teaching Neurophysiology.
- Made weekly quizzes and practicum style midterm and final exams.

Teaching Assistant: Neurophysiology

Florida Atlantic University (FAU)

Fall 2019 & Spring 2021

Boca Raton, FL

- Assisted graduate and undergraduate students in learning cellular measurement techniques and equipment setup.
- Developed independent research questions with each student as a final project.

Laboratory Assistant: Organic Chemistry II Labs

Nova Southeastern University (NSU)

August 2015 – May 2017

Ft. Lauderdale, FL

- Prepared chemicals and equipment for weekly labs.
- Learned organic synthesis techniques and variations on established techniques from overseeing professor.

Posters, Presentations, and Conferences

Akshay Naraine, Rebecca Aker, Isis Sweeney, Meghan Kalvey, Alexis Surtel, Venkatesh Shanbhag, and Ken Dawson-Scully; Roundup and glyphosate's impact on GABA to elicit extended proconvulsant behavior in *Caenorhabditis elegans*. Neuroethology: Sensory and Motor Systems II, Neuroscience (SfN) 2022, San Diego, CA, November 2022.

Poster presented at Integrative Biology 14th Annual Retreat, Jupiter, FL, February 2023.

Poster presented at Sunposium, West Palm Beach, FL, March 2023.

Akshay Naraine, Isis Sweeney, Rebecca Aker, Meghan Kalvey, Alexis Surtel, Venkatesh Shanbhag, and Ken Dawson-Scully; Roundup[®] and glyphosate exposure elicits proconvulsant behavior in *Caenorhabditis elegans*. Integrative Physiology and Behavior, Sensory and Motor Systems I, Neuroscience (SfN) 2021, Virtual, November 2021.

Akshay Naraine, Isis Sweeney, Rebecca Aker, Venkatesh Shanbhag, and Ken Dawson-Scully; Roundup[®] and glyphosate Exposure Elicits Proconvulsant Behavior in *Caenorhabditis elegans*. Experimental Biology 2021, Virtual, April 2021.

<https://doi.org/10.1096/fasebj.2021.35.S1.01914>

- **Press Release:** Abstract was highlighted by the American Physiological Society for EB 2021. The press release and video interview were included in over 5 different scientific news websites, including EurekAlert, published by the AAAS. Original APS press release: <https://www.physiology.org/publications/news/news/eb-2021-press-releases/2021/04/27/exposure-to-roundup-extends-seizure-like-behavior-in-roundworms?SSO=Y>

Akshay Naraine, Rebecca Aker, Isis Sweeney, Venkatesh Shanbhag, and Ken Dawson-Scully; Proconvulsant effects of Roundup[®] and glyphosate in *Caenorhabditis elegans*. Integrative Biology 10th Annual Retreat, Boca Raton, FL, February 2020.

Akshay Naraine, Rebecca Aker, Venkatesh Shanbhag, and Ken Dawson-Scully; Roundup's effect on *C. elegans* using an electroshock seizure assay. Integrative Biology 9th Annual Retreat, Boca Raton, FL, February 2019.

A. Rejimon, D. Lee, R.L. McPherson, M. Bouhrara, **A.S. Naraine**, K.W. Fishbein, O.V. Fedorova, R.G. Spencer; Comparison of cerebral blood flow in a rat model of hypertension and age-matched controls. International Society for Magnetic Resonance in Medicine Annual Meeting, Paris, France, June 2018.

A.S. Naraine, R.L. McPherson, D. Lee, A. Rejimon, K.W. Fishbein, R.G. Spencer, E.G. Lakatta, O.V. Fedorova; Effect of Aging and Hypertension on Cerebral Artery Volume as Measured by MRI in Dahl-Salt Sensitive Rats.

https://doi.org/10.1096/fasebj.2018.32.1_supplement.715.10

Poster presented at Experimental Biology Conference, San Diego, CA, April 2018.

Poster presented at National Institute on Aging Postbaccalaureate Symposium, Baltimore, MD, May 2018.

Poster presented at National Institutes of Health Postbaccalaureate Symposium, Bethesda, MD, May 2018.

Poster presented at Frontiers in Chemistry and Biology Interface Symposium, Philadelphia, PA, May 2018.

R.L. McPherson, **A.S. Naraine**, D. Lee, A. Rejimon, K.W. Fishbein, R.G. Spencer, E.G. Lakatta, O.V. Fedorova; MRI Characterization of Age-Associated Changes to the Cerebral Arteries in a Rodent Model of Aging and Hypertension.

https://doi.org/10.1096/fasebj.2018.32.1_supplement.715.7

Poster Presented at Experimental Biology Conference, San Diego, CA, April 2018.

Poster presented at Frontiers in Chemistry and Biology Interface Symposium, Philadelphia, PA, May 2018.

Naraine, Akshay S., Robinson, Prema Ph.D., Khalil, Amal Ph.D., Kasembeli, Moses Ph.D., Tweardy, David J. M.D.; Mechanism by which substance-P induces chemotherapy associated cardiotoxicity. Poster at Summer Undergraduate Research Symposium, Houston, TX, August 2017.

Naraine, Akshay S., Tartar, Jaime L. Ph.D.; The Influence of a Serotonin 2A Receptor Gene (HTR2A) on Stress Responsivity. Undergraduate Student Symposium, Ft. Lauderdale, FL, April 2017.

8 minute oral presentation with 5 minute Q&A session following.

Poster presented at Florida Undergraduate Research Conference, Boca Raton, FL, February 2017.

Wright, Stephen P., de Souza, Aline A., Pai, Amrita, Ji, Hong, Wu, Xie, Tatin, Xavier, **Naraine, Akshay S.**, He, Weston, Speth, Robert C., Forcelli, Patrick A., Sandberg, Kathryn; Effect of ovariectomy on cognitive function in the hypertensive Dahl salt-sensitive rat. Poster at Society for Neuroscience 46th Annual Meeting 2016, San Diego, CA, November 2016.

Naraine, Akshay S., Svedberg, Alissa, Galloway, Zachary, Shanbhag, Venkatesh Ph.D., Veliz, Eduardo Ph.D.; Development of a Library of Synthetic Compounds with Multiple Pharmacophores. Poster at Undergraduate Student Symposium, Ft. Lauderdale, FL, April 2016.

Invited Talks

Graduate Seminar Speaker:

“Using Invertebrate Models for Herbicide Neurotoxicity and Novel Neuroprotective Drug Screening” March 2023
Charles E. Schmidt College of Science, Florida Atlantic University (FAU) Boca Raton, FL

- Presented research on Roundup’s effect on convulsion behavior in *C. elegans* as well as novel drug screening results for antiepileptic drug discovery.
- Presented as part of FAU’s Center for Molecular Biology and Biotechnology Seminar Series.
- The audience of over 143 individuals were FAU professors and graduate and undergraduate students.
- Hosted by Dr. Ken Dawson-Scully, Senior Vice-President for Research and Economic Development at Nova Southeastern University & Affiliate Faculty of Biology at Florida Atlantic University.

“Delving into the Neuromodulatory Effects of Herbicides in Invertebrate Models” September 2022
College of Pharmacy, Nova Southeastern University (NSU) Ft. Lauderdale, FL

- Discussed the background and details surrounding the manuscript: Roundup and glyphosate’s impact on GABA to elicit extended proconvulsant behavior in *Caenorhabditis elegans*.
- The audience were Pharm. D students in NSU’s College of Pharmacy, Professors, and undergraduate students.
- Hosted by Dr. Robert Speth, Professor of Pharmaceutical Sciences at Nova Southeastern University.

“Neuro-circuitry and manipulation of seizures in *Caenorhabditis elegans*” March 2022
Biomedical Sciences, Morehouse School of Medicine (MSM) Atlanta, GA

- Discussed the benefits and shortcomings of using *C. elegans* as a model organism, the electroshock seizure assay developed in Dr. Dawson-Scully’s lab, and novel data of how herbicides affect *C. elegans* seizure behavior.
- The audience were students seeking a master’s degree in Biotechnology and enrolled in Data Science and Molecular Biology classes.
- Hosted by Dr. Rebecca McPherson, an Adjunct Professor at Morehouse School of Medicine

Undergraduate and Public Seminar Speaker:

“Emerging and Current Techniques in Translational Neurodegenerative Pharmacology”
Department of Biology Seminar, Nova Southeastern University (NSU) February 2024

- Presented computational, *in vitro*, and *in vivo* techniques currently employed in the Svenningsson lab to address Parkinson’s Disease.

“Bridged Bicyclic Compounds: Comprehending a Novel Compound Class as Potential Anti-Epileptic Agents”
Scientific Literature Society, Nova Southeastern University (NSU) September 2023

- Summarized the publication in *Epilepsia* for undergraduate students in aspiring health professions programs and had them engage the material through active discussion.

“A Roundup® of Data and Research...” October 2021
Scientific Literature Society, Nova Southeastern University (NSU) Ft. Lauderdale, FL

- Spoke to college students about my *C. elegans* research project involving glyphosate and how I shifted from a career trajectory in medicine to one in research.

“The Postbac Experience”

Scientific Literature Society, Nova Southeastern University (NSU)

January 2019
Ft. Lauderdale, FL

- Spoke to college students about the research and professional experiences at MD Anderson and the NIH.

“Researching Research”

Montverde Academy – Middle School

December 2018
Montverde, FL

- I shared my educational and research paths thus far with 8th Grade physical science students.
- I focused on the middle school experiences prompted me toward a love for research, and some of the most exciting research topics such as behavioral neuroscience and cancer immunotherapy.

“Understanding Aging”

Blue Star Trinidad and Tobago

July 2018
Claxton Bay, Trinidad and Tobago

- In West Indian communities, aging can be a daunting topic. With access to a wealth of natural resources, this talk introduced some of basic mechanisms behind the aging process as well as some of the most recent research.
- The goal was to provide a foundation of interest in the scientific mechanisms behind aging so it could be used in making lifestyle changes as well as improving scientific literacy.
- The talk was live streamed to a global audience via the Blue Star Facebook page and has since received over two thousand views.

Committee and Leadership Roles

Committee member: Department of Clinical Neuroscience Junior Faculty Retreat

Karolinska Institutet (KI)

April 2024 – October 2024
Stockholm, Sweden

- Developed interdepartmental professional development workshops and networking for fellow Junior Faculty
- Collaborated with international members to invite speakers, develop budgets, and connect with faculty to enhance skills in scientific communication, interdisciplinary networking, conflict resolution, and public engagement.

Committee member: MPFI NeuroMEETS Postdoctoral and Graduate Seminar Series

Max Planck Florida Institute for Neuroscience (MPFI)

June 2022 – May 2023
Jupiter, FL

- Developed the first extramural seminar series at MPFI for Postdoctoral fellows and graduate students, NeuroMEETS (Neuroscience Meetings for Extramural Emerging Talents).
- Collaborated with diverse committee members comprised of Research Group Leaders, postdocs, and graduate students from MPFI.
- Reviewed CVs and research statements from international applicant pool.
- Ranked and selected top candidates with committee to invite to MPFI and give research seminars.

International Max Planck Research School Student Representative

Max Planck Florida Institute for Neuroscience (MPFI)

May 2022 – May 2023
Jupiter, FL

- Liaison between Graduate Student Association chairs and MPFI Steering Committee comprised of leadership and administrators to communicate graduate student concerns and work on resolutions to improve the program.

Selection Committee Member: Distinguished Teacher of the Year Award

Florida Atlantic University (FAU)

2021 - 2022
Boca Raton, FL

- Sole representative from the College of Science on the Distinguish Teacher of the Year selection committee.
- Selected faculty nominee from the College of Science based on letters of nomination submitted by students in the departments of biology, chemistry & biochemistry, environmental science, exercise science & health promotion, geosciences, marine science & oceanography, mathematical sciences, neuroscience, physics, psychology, and urban regional planning.
- Reviewed portfolios and live lecture presentations from selected faculty nominees from all 9 of the university’s colleges.
- Collaborated with 8 other college student representatives to select one faculty member to be awarded Distinguish Teacher of the Year.

Graduate Student Representative for External Review

Department of Biological Sciences, Florida Atlantic University (FAU)

February 2022
Boca Raton, FL

- Discussed strategies and solutions to address improvements to the programs, teaching environment, and opportunities within the department of biology with the faculty of the external review panel.

- Committee member: Graduate Research Discussion Panel** June 2020
Office of Undergraduate Research, Florida Atlantic University (FAU) Boca Raton, FL
- Virtual panel discussion with undergraduate students interested in getting involved in research and graduate research programs.
- Committee Chair: Integrative Biology Retreat Committee** August 2019 – February 2020
Florida Atlantic University (FAU) Boca Raton, FL
- Planned and prepared for annual recruiting and retreat event for FAU’s biological doctoral program.
 - Organized student and faculty judges for poster session competition and assisted in planning the keynote speaker’s visit.
- S.T.E.M. Outreach and Community Service**
- Invited Panelist for Middle School Shark Tank** December 2023
Montverde Academy Montverde, FL
- Invited by the Alumni Committee to assess Middle School students’ business proposals in a “Shark Tank” format.
 - Students were assessed on the overall pitch, knowledge of vocabulary, engagement and research background, and impromptu decision making.
- Invited Alumnus Speaker** April 2023
Montverde Academy Montverde, FL
- Invited by the Alumni Committee to give a series of career and educational talks about research to middle and high school students. Approached to talk with middle and high School deans as well as the headmaster about program status and potential new innovations to grow the academy.
 - Students were engaged in classes such as Anatomy and Physiology, AP Biology, and Biology-Honors. Students selected into elite leadership programs were also given a one-on-one question and answer session.
- Elementary Science Fair Judge: Eye of a Scientist** March 2023
Eye of a Scientist Annual Science Fair Davie, FL
- Outreach for local non-profit organization which is committed to providing a novel science homeschool curriculum for elementary and middle school students.
 - Students from Kindergarten through Grade 5 presented their science fair projects using a poster and oral presentation. They were also assessed on their ability to answer questions.
- Poster Session Judge: Society of NeuroSports Annual Conference** February 2023
Society for NeuroSports Conference 2023 Deerfield Beach, FL
- Judged posters presented by undergraduate students, graduate student, and postdoctoral authors based on aesthetic standards and proficiency of scientific communication.
 - Scores were based on 10 criteria, and the judging resulted in awards for the top 3 presenters.
- Research Outreach to First-generation Undergraduate Students** February 2022
Office of First-Generation Student Success, Florida Atlantic University (FAU) Boca Raton, FL
- Shared potential networking and mentoring relationships, and research opportunities, including the RI: Neurophysiology class, with the First-Generation Kelly Strul Scholars and Soar-in-Four Scholars.
 - The Kelly-Struhl Emerging Scholars Program is an initiative started by President Kelly to provide academically talented, first-generation, under-resourced students with the opportunity to attend FAU debt-free.
- Science Olympiad Volunteer** February 2019, 2020
Florida Atlantic University (FAU) Boca Raton, FL
- Assisted high school students in learning crucial procedural writing skills through scientific competition.
- General Science Question and Answer Session** December 2018
World Class Tae-Kwon-Do Clermont, FL
- The goal was to inspire young children and teenagers about science by focusing on enthusiastic interactions as well as answering their questions about the world around them.
 - The age of the afterschool students ranged from 6 to 14-year-olds.
- Agricultural and Wellness Volunteer in Trinidad and Tobago** Summers from 2009 – 2017
Blue Star Trinidad and Tobago Claxton Bay, Trinidad and Tobago
- Assisted in harvesting local produce for a non-profit organization.
 - Promoted health and wellness from a holistic approach on behalf of the organization.
- Eco-Volunteer in South Africa** May 2014 – June 2014

Volunteer-Eco Student Association: Africa Unearthed

St. Lucia, South Africa

- Assisted in building a library for school-age children by laying a foundation.
- Taught South African history class to local seventh grader class about the original South African inhabitants.
- Aided in local wildlife conservation efforts for cheetah and crocodilian population.

Laboratory Mentor for High School Students

January 2016 – May 2017

Nova Southeastern University (NSU)

Ft. Lauderdale, FL

- Introduced high school students to simple Organic Chemistry experiments such as synthesis of acetaminophen.
- Introduced research techniques to high school students. They were able to genotype individuals using qPCR.

Grants, Awards, and Fellowships

Postdoctoral Scholarship for Education in Sweden

July 2024 – July 2025

Wenner-Gren Foundation

Stockholm, Sweden

Nicholson Exchange Scholar Award

January 2024 – January 2025

Karolinska Institute & Rockefeller University

Stockholm, Sweden

International Max Planck Research School Research Assistantship

August 2021 – August 2022

Max Planck Florida Institute for Neuroscience (MPFI)

Jupiter, FL

Graduate Fellowship for Academic Excellence

August 2020 – May 2021

Florida Atlantic University (FAU), Graduate College

Boca Raton, FL

1st Place for Poster Session

February 2019

Florida Atlantic University (FAU), Integrative Biology Retreat

Boca Raton, FL

Highest ranking for presentations at NIH Postbac Research Day

May 2018

National Institute of Health (NIH)

Bethesda, MD

President's Faculty Research and Development Grant

April 2016

Nova Southeastern University (NSU)

Ft. Lauderdale, FL

- A member of proposal team which received NSU's grant to continue research in developing novel antibiotics.

2nd Place for Oral Presentation Category

April 2017

Nova Southeastern University (NSU), Undergraduate Student Symposium

Ft. Lauderdale, FL

Honor Societies and Scientific Memberships

Society for Neuroscience Member

September 2021 - present

Membership sponsored by the Dawson-Scully Lab

Phi Kappa Phi Honor Society Member

April 2020 – May 2022

Florida Atlantic University (FAU)

Boca Raton, FL

American Association for the Advancement of Science Member

October 2019 - present

Membership sponsored by the Science Program for Excellence in Science

Tri-Beta Biology Honor Society Member

April 2016 - present

Nova Southeastern University (NSU)

Ft. Lauderdale, FL

Professional Development and Education

“How to form a creative university environment”

June 13, 2024

Karolinska Institutet

Stockholm, Sweden

- Comprised of an interactive panel discussion with Dr. Tosten Wisel, Nobel Laureate and President Emeritus of The Rockefeller University, Dr. Anna Wedell, 2023 IVA Gold Medal recipient and senior Physician at Karolinska Hospital, and Dr. Sten Linnarsson, professor of molecular systems biology at Karolinska Institutet and co-founder of the Eukaryotic Single-cell Genomics national infrastructure at SciLifeLab.
- Active discussion of professors, postdoctoral fellows, and students regarding creating efficient and high-quality research programs, securing stable funding, and mentoring students and inspiring them to stay in academia.

Electrophysiology Short Course

September 7-9, 2022

IMPRS for Synapses and Circuits, Max Planck Florida Institute for Neuroscience (MPFI)

Jupiter, FL

- Comprised of lectures and hands-on activities to explain electrophysiological theory and provide exposure to techniques.

- Plenary lecture by Dr. Erwin Neher, Nobel Laureate and Emeritus Director, Max Planck Institute for Interdisciplinary Sciences. Special lecture by Dr. Tim Harris, HHMI Janelia Research Campus.
 - Introduced **Dr. Erwin Neher** for his plenary lecture.
- Hands-on techniques included patch clamp recording, tetrode building, *in vivo* recording demos, and coding analysis.

Research Trainees

Rebecca Aker – Master’s Student, Dawson-Scully Lab, FAU	January 2019 – December 2021
Isis Sweeney – John Nambu Memorial Summer Research Experience for Undergraduates Program, Max Planck Honors Student Thesis: “The effect of Roundup® on seizure duration in <i>C. elegans</i> ”, Dawson-Scully Lab, FAU University of Florida, College of Medicine (M.D.)	February 2019 – May 2021
Alexis Surtel – Undergraduate Student, Dawson-Scully Lab, FAU National Institutes of Health Postbaccalaureate Program: David Sibley’s Lab (NINDS), Baptist University College of Osteopathic Medicine (D.O.)	May 2021 – May 2023
Meghan Kalvey – Undergraduate Student, Dawson-Scully Lab, Visiting Student New York University, Department of Psychology (Ph.D. in Cognition and Perception, Adolf Lab)	May 2021 – May 2022
Andrew Simonson – Max Planck Honors Student Thesis: “Novel antiseizure rescue effects from commercial herbicides in <i>Caenorhabditis elegans</i> , Dawson-Scully Lab, FAU University of Florida, College of Dentistry (D.M.D.)	August 2021 – May 2023
Carina Pavlov – Undergraduate Student, Dawson-Scully Lab, NSU	October 2022 – May 2023
Demaris Wiley – Undergraduate Student, Dawson-Scully Lab, NSU	October 2022 – May 2023
Ali Shigri – Undergraduate Student, Dawson-Scully Lab, NSU	October 2022 – May 2023
Sharvani Nune – Undergraduate Student, Dawson-Scully Lab, NSU	October 2022 – May 2023
Mackenzie McGrogan – Undergraduate Student, Dawson-Scully Lab, NSU	October 2022 – May 2023
Emma Hickey – Undergraduate Student, Dawson-Scully Lab, NSU	October 2022 – Present
Jeremy Ignatius – Undergraduate Student, Dawson-Scully Lab, NSU	October 2022 – Present