# Women in Science Enabling Research (WISER)
# Faculty Proposals for 2025-2026
# Laura Mayer Mentorship Program

**Here are EIGHT faculty proposals for AY 2025-2026. Please read each one carefully and choose two that interest you the most.**

**Faculty Name and Department:** Dan Cavanaugh, Dept of Biology

**Project Title:** Investigating the neurobiological basis of circadian rhythms

1) **Short description of the research project and goals for AY 2025-2026**
Most organisms have an internal circadian clock that produces daily rhythms in behavioral and physiological processes. This allows organisms to anticipate and adapt to the environmental cycles produced by the rotation of the earth on its axis. My lab uses the powerful model organism of the fruit fly, *Drosophila melanogaster*, to understand the neurobiological basis of circadian rhythms. We take a multifaceted approach, combining genetic, neuroanatomical, and behavioral techniques, to identify genes, molecules, and neuronal circuits that allow the circadian clock to control diverse physiological and behavioral outputs. During the 2025-2026 academic year, we will have several ongoing projects including determining the neurobiological mechanisms through which daily rhythms of feeding behavior are generated and understanding how these behavioral rhythms are synchronized with metabolic processes to ensure organismal health.

2) **In what capacity will the student participate in your project?**
3) **What tasks might the student be expected to complete?**
The student would directly contribute to one of several ongoing research projects in the lab, which would be chosen according to her interests. She would join a team of 1-2 other undergraduate students and would be involved in day-to-day activities such as 1) fly maintenance and husbandry, 2) behavioral analysis of locomotor activity or feeding rhythms, 3) brain dissection and immunohistochemistry to visualize protein expression and neuronal connectivity in the brain, 4) using molecular biological techniques such as PCR, restriction enzyme digest and bacterial transfection to create DNA constructs that will be used to generate novel lines of transgenic flies.

4) **What skills might be required of the student?**
We will teach any necessary skills. The student needs to be dedicated to the project and responsible to her colleagues.

5) **What do you hope the student will learn/gain from participating in your project?**
I hope the student will gain hands-on wet lab experience, learn how to ask scientific questions and conduct rigorous, carefully controlled experiments, and become familiar with reading scientific papers. I want the student to grow in her confidence and to see herself as a scientist.

6) **Biographical information:**
I received a Ph.D. in Neuroscience from the University of California, San Francisco and did postdoctoral research in the Sehgal Lab at the University of Pennsylvania. I joined Loyola's faculty in August 2015 and teach classes for the Neuroscience major. There are currently 8 undergraduates and 1 Master's student conducting research in my lab and they are a friendly and welcoming bunch. I have had 3 previous WISER interns who have all made important contributions to the lab, continuing on past their official WISER internship period and contributing as co-authors on manuscripts for publication in professional journals. My wife and I have a 9 yr-old daughter and a 5-yr old son who currently take up most of our free time.

**Faculty Name and Department:** Tauana J Cunha, Biology

**Project Title:** Sequencing the genomes of two deep-sea snails

**1) Short description of the research project and goals for AY 2025-2026**

Despite their huge biodiversity, genome-level DNA data from invertebrate animals remains scarce. Gastropods (marine snails and slugs) are the most diverse group of animals in the oceans, and many species await to be discovered. In 2021, two independent deep-sea expeditions in the Pacific and Atlantic Oceans collected samples of a slit-limpet in the genus *Zeidora* at about 10,000 ft depth, and provided the first photographic and video recordings of this group of animals (see https://youtu.be/ejmtRZJ13LA?feature=shared&t=865 from 14:25 to 18:33). I am currently describing these as two new species in an upcoming publication. In this follow-up project, the student will work with me in extracting the DNA of these two species to sequence long DNA fragments in the lab and then reconstruct their genomes through computational work. These will be novel genomic resources to study the evolution of these animals.

**2) In what capacity will the student participate in your project?**

The student will lead data collection and analysis, including lab and computational work. They might also participate in writing of a draft manuscript to be later submitted for publication.

**3) What tasks might the student be expected to complete?**

Lab work: DNA extraction and sequencing of long fragments.

Computational work: reconstructing the genomes through a series of bioinformatic steps.

Lab work will be relatively short; the computational component is expected to be the longest in terms of time and effort.

**4) What skills might be required of the student?**

Organized and science-motivated students will make the most out of the internship. A growth mindset and determination through the learning curve of developing bioinformatics skills (super cool and worth the effort!). Good time management skills will help.

**5) What do you hope the student will learn/gain from participating in your project?**

- Laboratory skills (pipetting, DNA extraction, quality control, familiarity with the latest sequencing technologies)
- Data organization
- Analysis and interpretation of genomic data
- Knowledge of marine animal biodiversity
- Experience managing project development

**6) Biographical information:**

I have always been fascinated by the incredible diversity of invertebrate animals, especially small marine critters that most people have never heard of. Throughout my career I discovered that I was especially interested in how this diversity evolved throughout millions of years and across space, and that I enjoyed learning (and teaching) bioinformatics. I integrated all that into a research program where I do fieldwork around the world collecting specimens (for example Japan, the Maldives, Panama, the Canary Islands), bring preserved animals to the lab to sequence their DNA, then spend time analyzing data and understanding what it means, and finally write up my findings into publications to share with the scientific community and others.

I got my PhD at Harvard University, and my BSc at the University of São Paulo (I'm from Brazil). Before joining Loyola, I worked at the Smithsonian Tropical Research Institute in Panama and at the Field Museum of Natural History here in Chicago. I have mentored undergrads and high school students in research, including through programs that support women in science. My website summarizes some of my past work: https://tauanajc.github.io/

**Faculty Name and Department:** Catherine Putonti, Biology

**Project Title:** Exploring the role of bacteria in urinary health

**1) Short description of the research project and goals for AY 2025-2026**

While urinary infections are often not fatal, they can have a significant impact on quality of life, disproportionately affecting females and the elderly. The urinary tract of healthy individuals is home to numerous bacterial species, often not found elsewhere in the human body. These bacteria exist within a community, often consisting of multiple different species. Many of these bacteria provide defense against pathogens. The urinary tract is a unique environment; it is nutrient poor and volatile. (Just think about how many times you empty your bladder in a day!) In order to study these organisms, we need to identify culture conditions within the lab that allow them to thrive, replicating the urinary tract environment when and where possible. In this project, the student will gain hands on experience working with clinical isolates, learning how to culture the bacteria under various conditions and measure their fitness using various molecular and microbiology techniques. The ability to effectively grow these bacteria within the laboratory will enable us to ask questions relevant to urinary health, e.g., how do *Lactobacillus* species kill uropathogenic *E. coli*, and thus test these questions in the lab under conditions that are relevant to the urinary tract. Full disclosure, we don't work with patients, and while, yes, our research can have health benefits, we're driven by questions focused on better understanding the microbes and their interactions within the urinary tract. The questions the lab asks often have implications far beyond the human microbiota and human health.

**2) In what capacity will the student participate in your project?**

The student will learn how to grow and work with clinical isolates. They will be responsible (after they have been trained [of course] and feel comfortable) for growing bacteria and performing experiments. The student and I will together design experiments.

**3) What tasks might the student be expected to complete?**

The student will be expected to complete a series of experiments to test hypotheses designed by the student and myself. They will present their research either at a lab meeting and/or a Loyola or area research symposium.

**4) What skills might be required of the student?**

Curiosity and patience are a must. Flexibility in scheduling. Sometimes, the student will need to pop in for 5 minutes to start a bacterial culture growing so that they can do an experiment in 2 days. Unfortunately, we work on "bacteria-time." (No requirement for weekend or night visits to lab.)

**5) What do you hope the student will learn/gain from participating in your project?**

The student will learn basic microbiology and molecular biology techniques as well as reading scientific literature. Hopefully, the student will also gain a love of microbes!

**6) Biographical information:**

My PhD is in computer science. I'm a computational biologist. While doing my PhD (which was focused on developing bioterrorist detection systems) at the University of Houston, I grew tired of relying on microbiologists to test the assays that I had designed. Furthermore, I was curious exactly how they tested them as at that time my understanding of microbiology and molecular biology was simply what I'd read in books. I decided that I wanted to learn and a faculty member in the Microbiology department was kind enough to teach me. While I couldn't actually test my assays (as nobody in their right mind was going to give me anthrax), I had a better understanding of the processes. This helped me design better assays and started my love of the microbial world (which led to me getting an MS in Ecology and Evolution after my PhD). I joined Loyola's faculty in 2007 and started both a wet lab and a computational lab. Throughout my undergraduate and graduate studies, I was one of very few females in CS. It wasn't until the last class of my PhD that I had a female CS professor. At LUC, I've always tried to be an advocate for women in STEM, regardless of their "flavor" of science. Over the last decade, my research has shifted to focus on women's health issues, more specifically urinary tract symptoms. UTIs and other urinary symptoms (e.g., overactive bladder symptoms) disproportionately effect females and can have profound impacts on quality of life. I didn't pick the urinary tract for any personal reason, rather it's a relatively low-complexity community (in comparison to, e.g., the gut, wastewater treatment plants, soil, Lake Michigan) and it's easy to get samples.

**Faculty Name and Department:** Martina Schmeling, Department of Chemistry and Biochemistry

**Project Title:** Assessment of Environmental Pollution in Chicago using Plants

**1) Short description of the research project and goals for AY 2025-2026**

Environmental pollution is a common occurrence in many urban areas including Chicago which has been a center of industrial production and a major transportation hub for more than a century. Special zones, known as industrial corridors, have been set aside to accommodate the different industries, but concerns have grown that the pollution from these industrial corridors impact surrounding communities. Whereas air pollution is being monitored per state requirement, very little is known about soil pollution, especially in form of heavy metals, and how those affect local neighborhoods. Heavy metals are toxic to all organisms when they exceed a certain threshold concentration. Some of the most notorious ones are lead, cadmium, chromium, copper, and nickel. One way to find out whether these metals are present is through the use of plants. We found that wild carrot (*Daucus Carota*), a common weed, is capable of accumulating the mentioned heavy metals within its roots and shoots. Therefore we sampled and analyzed wild carrot plants along with roots and some soil from selected industrial sites in Chicago for their heavy metal content. We identified specific 'hot spots' for each of the heavy metals and are now focusing on those locations to determine whether these pollutants are confined to a small area or are migrating into adjacent communities. Our plans for the academic year 2025/26 are a) to collect and analyze additional samples from these sites to verify and extend our previous measurements about the detected heavy metal concentrations and to obtain a pollutant distribution map for each site and b) to understand which of the heavy metals are the most mobile and therefore might pose an exposure risk to local communities.

**2) In what capacity will the student participate in your project?**

When you decide to join our research group, you will participate in many aspect of the research project: you will take part in the sample preparation of the plants, roots and soil as well as their analysis by atomic absorption spectrometry. Sample preparation involves washing, drying, grinding, weighing, and digestion of the samples with acid to isolate the heavy metals. The resulting solutions will then be transferred to specific vials for analyses. Since the analysis is mostly automated, you will learn how to operate the instrumentation and how to prepare standards for quantification. Additionally, if needed, you will also help in the acquisition of additional plant and soil samples at the industrial sites and around Loyola's Lake Shore campus. The latter ones are for control purposes.

**3) What tasks might the student be expected to complete?**

Your main task will be preparing and analyzing plants, roots and soil samples. This entails sorting the samples by size and then separating the roots from the plants/shoots. After that each sample needs to be carefully washed, dried and crushed before being digested with acid. The solution obtained through digestion will be distributed into vials and then transferred to the atomic absorption spectrometer for analysis. In addition, you will help to make standard solutions for each element to ensure quantification and learn how to program the machine for analysis.

Moreover, you will also participate in processing the results and comparing those to threshold values, which will help to create a map showing the distribution of heavy metals at the specific locations.

**4) What skills might be required of the student?**

If you have already acquired some laboratory skills such as pipetting or preparing solutions this will be helpful but is not a must to join our lab. The main skills needed are to be able to listen and follow instructions and to be conscientious and diligent when it comes to executing the instructions.

**(CONTINUED) Faculty Name and Department:** Martina Schmeling, Department of Chemistry and Biochemistry

**Project Title:** Assessment of Environmental Pollution in Chicago using Plants

**5) What do you hope the student will learn/gain from participating in your project?**

Overall my hope is that you will gain a better understanding of how research, specifically the combination of field and laboratory research, is an important tool to identify environmental pollution and crucial to address concerns surrounding our society. Additionally, you will hone your laboratory skills with respect to preparing samples meticulously, manipulating chemicals and operating scientific instrumentation. Finally, you will learn how data processing and evaluation is important for providing an unbiased view of the results.

**6) Biographical information:**

My research interests are focused on the analysis of pollutants in a variety of samples, mostly found in the environmental and biomedical field. Some of my former projects involved the study of air pollution in Chicago and the analyses of beverages for heavy metals. Current research projects are dealing with the identification of trace metals in human cataract lens tissues, heavy metals in vinegars, and as said bioindicators. I am also involved in a long-term study about cleaning and analysis of samples returned from space by the NASA Genesis mission. Each type of sample has its own unique challenge, and our lab tries to overcome those by developing sample preparation methods specifically tailored for obtaining the most optimal procedure.

In my more than 20 years at Loyola, I have taught a variety of courses ranging from freshmen chemistry to graduate level advanced analytical chemistry and honors courses about environmental pollution and climate change. Our lab has a longstanding collaboration with researchers at the Stritch School of Medicine and with members of the Genesis science team.

**Faculty Name and Department: Yoel Stuart, Associate Professor, Biology Department**

**Project Title: Exploring Central American cichlid fish diversity**

**1) Please provide a short description of your research project and goals for AY 2025-2026**

My lab is investigating Central American cichlid fish diversity, in collaboration with the Curator of Fishes at the Field Museum of Natural History. We are asking why some clades have lots of species and others don't, and we are asking when during development species-specific differences arise. Goals for AY 2025-2026 include finishing morphological data collection and completing analysis in preparation for publication.

**2) In what capacity will the student participate in your project?**

The student will be responsible for generating a large, multivariate morphological dataset and will take part in data analysis.

**3) What tasks might the student be expected to complete?**

**a.** Complete training in the placement of digital landmarks on photographs
**b.** Use landmarks to collect morphological data for ~1000 cichlid individuals from photographs we already have in the lab.
**c.** Take and digitize new photographs if needed.
**d.** With training, begin analysis by building an R project and generating summary statistics

**4) What skills might be required of the student?**

a. Attention to detail
b. Precise notetaking and bookkeeping to keep data organized
c. Willingness to ask questions and ask for help: communicate
d. An ability to repeat rote tasks
e. An ability to self-motivate and complete tasks on time
f. Enthusiasm for science

**5) What do you hope the student will learn/gain from participating in your project?**

The student will learn how to design a data collection project, how to collect and organize data, how to use R statistical software, and how to interpret results.

**6) Provide a short INFORMAL biographical paragraph to introduce yourself to students. Feel free to share what drew you to your field and way in which you have supported women in science.**

I am an evolutionary ecologist asking how fast and how repeatably does evolution proceed. I am fascinated by the diversity of life on earth and how evolution generated it. We study lizards and fish, mostly. 2025-2026 will be my seventh year at LUC. In my time here, I have mentored >50 students, many of them for multiple semesters. My lab is diverse group committed to a research environment that is collaborative, collegial, and supportive. I think of my labspace as a home for my students on campus. Many of my students have been women and many of them have gone on to the professional careers of their choice. I think that my mentorship played a part (albeit small) in their success. For example, Megan O'Toole, a former WISER student, is now at GE Healthcare. Sidney Ryan, Marielle Martin, and Samantha Swank are all in PhD programs in Biology fields. Raheyma Siddiqui, Allison Ozark, and Emily Ciolak at Stritch Medical School.

**Faculty Name and Department:** Paula Tallman, Department of Anthropology

**Project Title:** Water Insecurity and Health in the Peruvian Amazon

**1) Please provide a short description of your research project and goals for AY 2025-2026**

Our team has been conducting research on water insecurity and health among an Indigenous population in the Peruvian Amazon since 2013. For AY 2025-2026 we are seeking a student interested in assisting with data analysis, writing of manuscripts, and writing of grants for future work.

**2) In what capacity will the student participate in your project?**

The student will join our interdisciplinary team as a key member.

**3) What tasks might the student be expected to complete?**

The student will be asked to assist with literature reviews, data entry, quantitative data analysis, write-up of the results, manuscript writing, and research design for future investigations in the Peruvian Amazon.

**4) What skills might be required of the student?**

Student will be trained in required skills for the research. The team appreciates students who are enthusiastic and responsive.

**5) What do you hope the student will learn/gain from participating in your project?**

We aim for the student to gain “hard” and “soft” research skills. The “hard” skills include critical analysis of prior research, analysis of primary data, and skills in scientific writing for publication and grant submission. The student will also learn how to work on an international, interdisciplinary research team. This will include “soft” skills like time management, setting of internal deadlines, group communication, and collaborative writing.

**6) Biographical information:**

My name is Dr. Paula Skye Tallman and I am a biocultural anthropologist. I first visited the Amazon rainforest when I was 16 years old and this inspired me to pursue studies of the relationship between environmental stressors and human health. This journey led me to study neuroscience and immunology at Johns Hopkins University and then to complete a PhD in biological anthropology at Northwestern University. For my thesis, I lived in an Indigenous community in the Peruvian Amazon for more than one year, starting in 2013. In 2024, I was able to take 3 women students to this field site. For the WISER program, we are seeking an additional student to help us with data collected during this most recent visit. More broadly, I am committed to supporting all people, and particularly women, in gaining research experience. Because I am a woman and a mother, I can speak to the unique social and biological challenges faced by women, and people choosing to bear children, as they navigate scientific and academic careers. We are whole people (not just our careers) and joining our team means that your life story, and wholeness, will be recognized and celebrated as part of the unique background and skills you bring to our work.

**Faculty Name and Department:** Xiang Wan, Department of Mathematics and Statistics

**Project Title:** Numerical Solvers for Optimal Controls of Maxwell's equations

**1) Short description of the research project and goals for AY 2025-2026**

**Introduction.** Electromagnetism plays a central role in almost every field of science and engineering, and problems of optimal control of electromagnetic waves arise in a variety of applications including, but not limited to, energy science, nanotechnology, stealth technology, design and control of antennas and related fields. Maxwell's equations are the cornerstone of the theory of electromagnetism and are commonly used as "building blocks" to derive coupled systems of differential equations involving electromagnetic phenomena.

Over the past decades, mathematical challenges associated with both analytical and numerical investigation of Maxwell's equations have inspired a number of important studies and developments, especially the optimal control for Maxwell's equations. The optimal control framework mostly involves classic tools such as Pontryagin's Principle, Karush–Kuhn–Tucker (KKT) optimality conditions, as well as regularity properties (and lack thereof) of minimizers with respect to various objective functionals. There have been quite some theoretical results developed by the math community, some by the PI in the past few years.

That said, there are lots of gaps between the theoretical/analytic and applied/numerical sides of the subject. Indeed, it is demanded by communities on the applied side that research on Maxwell's equations are pursued in such a manner that the results are as explicit and constructive as possible so that they can be applied to facilitate the pursuit of numerical algorithms. Therefore, appropriate numerical solvers need to be developed.

**Goal.** This project aims to present a semismooth Newton-type algorithm to numerically solve the Potryagin's nonsmooth nonlinear optimality system and to understand its accuracy and complexity properties. Such work will also lead to a state-of-the-art model reduction technique of Proper Orthogonal Decomposition (POD) with a POD based a-posteriori error analysis.

**2) In what capacity will the student participate in your project?**

This project aligns with one of the PI's broader research projects, which is a holistic research program aimed at advancing theoretical and numerical control of Maxwell's equations. While the theoretical framework of the study requires knowledge presented often in advanced graduate courses, this project aims to be more suitable for undergraduate students. In particular, the student will work closely with the PI in conjecturing, implementing, and verifying numerical solvers of the minimizers for the optimal control problem.

**3) What tasks might the student be expected to complete?**

a) to develop a semi-smooth Newton iteration algorithm for the controlled problem, incorporating the spatial discretization using the mixed finite difference and finite element methods and temporal discretization employing the Crank-Nicolson scheme;
b) to conjecture and to verify the solvability of the algorithm above numerically;
c) (if time allows) to analyze the size of the problem and complexity of the hyperbolic structure in the spacial discretization, which limits either the numerical accuracy or efficiency of the algorithm.

**4) What skills might be required of the student?**

The student is required to have at least taken Calculus II and some programming courses, or some equivalences from high school if they didn't get credited by Loyola. Ideally, by the time the project starts, the student have taken or will be taking Calculus III (MATH 263), Linear Algebra (MATH 212), and ODE(MATH 264), or their equivalences.

**(CONTINUED) Faculty Name and Department:** Xiang Wan, Department of Mathematics and Statistics

**Project Title:** Numerical Solvers for Optimal Controls of Maxwell's equations

**5) What do you hope the student will learn/gain from participating in your project?**

The student will learn how to apply their math and programming skills to a cutting-edge and extremely important problem of electromagnetism. They will gain a deep understanding of how modern mathematics is applied in understanding and steering sciences and engineering. The specific tasks will prepare them in a broad field of optimizations, which is the foundation to not only mathematical control theory, but also to Operations Research, Economics, Machine Learning, Artificial Intelligence, and so on.

**6) Provide a short INFORMAL biographical paragraph to introduce yourself to students. Feel free to share what drew you to your field and way in which you have supported women in science.**

I have been an Assistant Professor at the Department of Mathematics and Statistics since August 2022. My research area is Analysis in general, including both qualitative and quantitative studies of models originated from real-world models. An important part of my research involves numerical 'lab' work, namely, coming up with numerical algorithm and analysis via (high performance) computing facilities to understand the mathematical models of interest, such as the project in this proposal.

I am always delighted to work with undergraduate students, especially those women interested in STEM fields. Ever since joining Loyola, I've worked with more than 11 undergraduate students in various research projects, 8 of whom are female. I've participated in WISER in summer 2023 with a student who was then just finished her first year at Loyola. After concluding the project that summer, she continued working with me on more advanced projects and has also done a summer REU at Northwestern in 2024. I am thrilled to learn that the WISER is now extended to a full year program and would love to see more female students entering the field. For this project, I anticipate continuing with the student after its conclusion by the end of AY2025-26.

**Faculty Name and Department:** Wei-Ming Yu, Department of Biology

**Project Title:** Unraveling the Role of Ephrin/Eph Molecules in Sound Frequency Map Formation

**1) Please provide a short description of your research project and goals for AY 2025-2026**

For the auditory system to distinguish a wide variety of sounds, its neurons must form highly organized circuits. One critical example of this organization is the tonotopic sound frequency map, where neurons across different levels of the auditory pathway are arranged based on their sensitivity to specific sound frequencies (pitches). Disruptions in this map can lead to difficulties distinguishing sound pitches, contributing to certain hearing disorders and learning disabilities. Although the tonotopic sound frequency map is essential for hearing and has significant clinical relevance, the molecular mechanisms driving its development remain unknown. Preliminary research in our lab has shown that ephrin and Eph molecules are present in the auditory system during early development. These molecules help guide the pathways of auditory neuron axons, suggesting they might play a key role in creating the frequency map. To explore this possibility, the student involved in this project will use two behavioral tests to evaluate hearing function in mice with mutations in ephrin or Eph genes. The findings from this study could shed light on how these molecules shape the auditory system's organization, offering important insights into the mechanisms behind precise sound frequency mapping.

**2) In what capacity will the student participate in your project?**

The student will learn how to handle mice and perform behavioral assays. The student will also be trained in statistical analysis to interpret their data. Additionally, the student will contribute to preparing a poster presentation to share findings at a scientific meeting.

**3) What tasks might the student be expected to complete?**

The student will perform auditory brainstem response (ABR) recordings, a simple and widely used hearing test that is also employed for newborn hearing screenings, to compare hearing function in control and mutant mice. Additionally, the student will expose mice to pure tones and analyze neuronal c-Fos activation to evaluate the precision of frequency band representation in the auditory brainstem between control and mutant groups.

**4) What skills might be required of the student?**

No prior experience is required, as the student will receive comprehensive training in all necessary techniques from senior lab members or Dr. Yu. However, the student needs to be comfortable handling mice.

**5) What do you hope the student will learn/gain from participating in your project?**

I hope the student will gain valuable hands-on experience conducting animal experiments, develop skills in reading and critically evaluating scientific literature, and learn how to analyze and interpret scientific data. Additionally, I aim for the student to foster a deep curiosity for scientific research and strengthen critical thinking and problem-solving abilities, which are essential for a successful career in science.

**6) Biographical information:**

I obtained my Doctor of Veterinary Medicine (DVM) and M.S. in Biochemistry and Molecular Biology in Taiwan before pursuing my doctoral studies in the United States. I completed my Ph.D. in Neurobiology and Genetics in Dr. Sidney Strickland's lab at The Rockefeller University in New York City. After seven years of postdoctoral research in Dr. Lisa Goodrich's lab at Harvard Medical School, I joined the faculty at Loyola University in 2016, where I teach courses on Neurobiology and Neural Diseases. My lab is supported by a National Institutes of Health (NIH) R15 grant, along with several internal grants. Our team currently includes six undergraduate researchers (five female and one male) and one female postdoctoral researcher. Together, they create a collaborative, supportive, and welcoming environment.