

REU 2024 Internship at Bernal Lab

(May 20th -July 26th, 2024)

The goal of the REU program is to enhance research opportunities for undergraduate students through targeted summer programs. This REU program at the Bernal lab will focus on our research which involves studying the behavior, ecology, and neurophysiology of frog-biting mosquitoes. We are interested in understanding the mechanisms underlying the behavior and perception of frog calls that the mosquitoes use to find their host and obtain a blood meal.

The overarching goal of this research project is to provide students from underrepresented backgrounds in STEM to get targeted training in sensory ecology, mosquito and anuran behavior, and anthropogenic effects. ***The intern will participate in laboratory experiments with mosquitoes and frogs involving bioacoustics, animal behavior, microscopy, and neurophysiology.*** In addition, the student will participate in fieldwork in the Greater Lafayette area to assist with experiments evaluating the effect of sensory pollutants (traffic noise and artificial light at night) on communication systems. We are particularly interested in supporting scientists from institutions with limited research opportunities.

Responsibilities

REU students will participate in all aspects of the research process: research design, fieldwork, data collection (in the field and lab), bioacoustic experiments, data entry, coding, and statistical analysis. In addition, students will have the opportunity to interact as colleagues and therefore are expected to participate in lab meetings, read relevant literature, and deliver a capstone presentation at the end of the summer. Students will also attend professional development activities designed to provide support and advice on career readiness and advancement.

Students must commit to the full 40 hrs/week, May 20th - July 26th program. Lab and Field work may overlap with weekends, depending on experiment plans.

The REU Fellowship includes a \$625/week stipend. On-campus housing is included in addition to the stipend. Travel costs cannot be covered.

Students will be part of a larger REU program in the Biological Sciences Department and will closely interact with students doing research in structural biology.

Eligibility for the program:

To be eligible for this internship, you must:

- be a U.S. citizen or permanent resident
- be a full-time undergraduate student in a baccalaureate or associate degree program, and be returning to your institution after the program
- have experience or be comfortable working around mosquitoes and amphibians both in the lab and outdoors.

A primary objective of this REU site is to include students who have had fewer research opportunities, including (but not limited to) those attending non-Research universities, students from underrepresented groups, and first-generation college students. Overall, the REU opportunity is designed to enhance the research experience, scientific toolkit, and academic portfolio of undergraduate students. Our aim is for students to meaningfully engage with the research, and to help them define their own research interests for their next career steps.

The internship will take place from May 20th to July 26th, 2024.

Application process:

To apply to this internship, fill out the application [here](#).

Applications are due by March 15th, 2024.

Questions?

For more information, contact Dr. Ximena Bernal (xbernal@purdue.edu) or Dr. Richa Singh (sing1098@purdue.edu).