

Faculty Member Contact Information

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Description of the URCA Assistant Position

This posting includes one funded position. In addition, the faculty member may be willing to mentor additional, unfunded students.


How many unfunded students is this professor taking in addition to his/her one funded student? 1

(Students, if the faculty member will have both funded and unfunded students, he or she is free to select which student receives the funding. Funding cannot be split up between multiple students; only one student will receive it.)

Which of the following apply to this position?

This position is **only** open to students who have declared a major in this discipline. **M**

This project deals with social justice issues. 

This project deals with sustainability (green) issues. 

This project deals with human health and wellness issues. **+**

How many hours per week will your student(s) be required to work in this position? 9

(Minimum is 6 hours per week; typical is 9.)

Will it be possible for your student(s) to earn course credit? Yes No

If yes, in which course? BIOL 4910

If yes, for how many credit hours? 3

Location of research/creative activities: SL 3209c

Brief description of the nature of the research/creative activity:

The long-term goal of my lab is to identify and elucidate novel mechanisms that regulate glutamate receptor (GluR) expression and localization. GluRs are important for processes like learning and memory and are implicated in epilepsy and neurodegenerative diseases. We have found that the autophagy family of proteins regulates the number of synaptic GluRs. The student that is awarded this position will investigate, for the first time, the influence of Atg5, Atg6, and Atg18 on glutamate receptor localization using immunohistochemistry.

Brief description of student responsibilities:

Gain familiarity with the background literature. Dissect *Drosophila* larvae, perform immunohistochemistry, visualize labeling using confocal fluorescence microscopy, perform qRT-PCR, and analyze data.

URCA Assistant positions are designed to provide students with *research or creative activities* experience. As such, there should be measurable, appropriate outcome goals. What exactly should your student(s) have learned by the end of this experience?

I would like students to gain an appreciation for research by understanding experimental design and analysis and the rationale for performing a given experiment. I would also like the student to get practice developing and testing hypotheses and gain experience in presenting their data by designing and presenting a poster for a local or national conference.

Requirements of Students

If the position(s) require students to be available at certain times each week (as opposed to them being able to set their own hours), please indicate all required days and times:

Students must attend weekly lab meetings (time and location TBA) but the schedule is flexible outside of lab meetings.

If the location of the research/creative activities involves off campus work, must students provide their own transportation?

N/A

Must students have taken any prerequisite classes? Please list classes and preferred grades:

BIOL 319 with a B or better

Other requirements or notes to applicants:

none