






**Faculty Member Contact Information**

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<b>Department</b>	Biological Sciences

**1 Funded, 1 Unfunded URCA Assistant**

<b>X</b>	This position is <b>ONLY</b> open to students who have declared a major in this discipline.	<b>M</b>
	This project deals with social justice issues.	
	This project deals with sustainability (green) issues.	
	This project deals with human health and wellness issues.	
	This project deals with community outreach.	
	This mentor's project is interdisciplinary in nature.	

**Are you willing to work with students from outside of your discipline? If yes, which other disciplines?**

- No

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

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

- 9 hours

**Will it be possible for your student(s) to earn course credit?**

- Yes—BIOL 493 (2 credit hours)

**Location of research/creative activities:**

- Science West Room 0220

**Brief description of the nature of the research/creative activity?**

This research will examine locomotion in juveniles of the direct developing frog, *Eleutherodactylus planirostris* (Greenhouse Frog). Juveniles of this species are at the lower limits of vertebrate size. My lab previously determined that a group of miniaturized frogs known as pumpkin toadlets are unable to control their landing behavior during jumping due to a size-based locomotor constraint. Students will film juvenile greenhouse in the frogs in the lab with high-speed video to determine if a similar constraint is present in other groups of frogs.

**Brief description of student responsibilities?**

Students will participate in animal care training and will learn how to breed frogs in captivity. They will learn how to quantify animal locomotor behavior in the lab. They will also gain experience in analyzing morphological and behavioral data and will be expected to present the results of their research at a scientific meeting. They will also assist with manuscript preparation for publication in a scientific journal.

**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?**

The student will know:

- 1) how to care for and handle live animals
- 2) how to quantify locomotor (kinematic) behavior with high-speed video
- 3) how to take morphological measurements
- 4) how to use Excel, MATLAB, and statistical software for data analysis
- 5) how to take laboratory notes
- 6) how to prepare a poster for presentation at a scientific meeting

**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:**

- N/A

**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 150 and 151 with at least a B

**Other requirements or notes to applicants:**

- N/A