





Faculty Member Contact Information

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Contact Info	
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Department	Biological Sciences

1 Funded, 3 Unfunded URCA Assistant

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

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

Yes

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)

6-9

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

BIOL 493 0-2

Location of research/creative activities:

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

This project is about insect microbe associations and the way in which colonization by microbes impacts their host's physiology, ecology, and evolution. Students would be working to develop and execute assays to determine the toxicity (both bacteriocidal and insecticidal) of novel bacterial toxins or bacteriophages. This will involve the use of molecular techniques like PCR, microbiology techniques like bacterial culturing, and entomology techniques like insect rearing.

Brief description of student responsibilities?

Students are responsible for their research projects in their entirety. Students are often working independently and must be self-motivated, curious, diligent, and earnest. This includes but is not limited to: study design/planning, experimental execution, lab maintenance, data analysis, and scientific communication (written & oral).

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?

Working in the BugGuts lab is an authentic research experience. This means that students have the autonomy to design their own experiments and chase their own curiosities. Students get to experience "ah ha" moments, intellectual breakthroughs, and the thrill of completing a long experiment. This also means that sometimes experiments fail, equipment breaks, and bacteria/insects die unexpectedly. Importantly, students get to do all of this in an environment where they have a sounding board to talk through what happened, learn from it, and apply it to the next task. By the time students leave my lab, they will be equipped with a ton of basic technical expertise, but the life experience embarking on a real research experience is arguably even more valuable.

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 be available to work their 9 lab research hours between 8am and 5pm M-F.

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

Research will take place in Science West 1340 on SIUE's main Edwardsville campus.

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

Passing grade (C or better) in BIOL 150.

Other requirements or notes to applicants: