

Faculty Member Contact Information

Name	Elizabeth Esselman, PhD
Contact Info	
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Campus Box	1651
Department	Biological Sciences

1 Funded, 1 Unfunded URCA Assistant(s)

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)

- 9

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

- Yes, in Bio 493 for 1 credit hours.

Location of research/creative activities:

- SW room 1230 Research Lab

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

- Our lab works on preserving Illinois native orchids. All orchids require fungi for seed germination and they form relationships with them throughout the orchids life. Because they are so critical for orchid survival we collect, identify and use orchid root fungal associates to answer questions about fungal genetic diversity and try to identify isolates that will germinate orchid seeds. We also work with bacterial associates of Orchid plants roots. We plan on trials with Corn plants in the greenhouse to see how orchid bacteria will affect growth.

Brief description of student responsibilities?

- Students will learn to autoclave, subculture fungi using aseptic techniques, make and pour agar plates, isolate DNA, set up PCR reactions and pour gels to check banding patterns.
- Students also help with prepping reactions to send off for sequencing and learn to interpret sequencing results. We also go out into the field periodically to collect orchid roots on the SIUE campus.

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?

- Students will master aseptic technique and learn to use the autoclave, isolate DNA and perform PCR reactions.
- Students who work in my lab are encouraged to present posters at state and local meetings. This work can also be used to satisfy research poster requirements for our departments required senior assignment (Biol 492M). I also encourage students to come up with ideas for their own independent projects.

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:

- I do not have a set schedule. Every semester I work with students to find times when they are available to come into lab.

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

- no

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

- I require students to have taken 150 and 151 with a B or better.

Other requirements or notes to applicants:

- none