

POSITION # F09-010

Faculty Member Contact Information

Name: **Dr. Thomas Fowler**
Department: **Biological Sciences**
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Description of the URCA Assistant Position(s)

Number of students requested: **2**
Number of students who will be funded: **2**
Will the student(s) earn course credit? Yes **X** No If yes, in which course? **BIOL493k-009**
Location of research/creative activities: **Science Building SL3216b**

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

Molecular genetic and cell biology studies of cell signaling that will contribute to our understanding of cell-cell recognition signaling pathways. The study organism is a mushroom fungus.

Brief description of student responsibilities:

Students involved in this project will be hands on researchers in a molecular genetics lab. Techniques involved are DNA isolation, recombinant DNA cloning, bacterial and fungal culturing, DNA transfer, and some bioinformatics. Students will keep a lab notebook, be trained in lab safety, read pertinent scientific literature and participate in regular lab group meetings.

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?

At the end of their term, the students should understand the principles behind a few basic laboratory techniques (see above), be proficient at these laboratory techniques, and be able to troubleshoot difficulties with these techniques. The students should understand the way scientific experiments are designed and executed in a molecular genetics lab. The student should make connections between Biological Sciences core course lecture material and how it applies to research techniques.

Additional 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:

Daytime hours to start (for training), some flexibility to stop by the lab every week day to start or stop experiments as necessary.

If the location of the research/creative activities is off campus, must students provide their own transportation? Yes___ No___ N/A

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

BIOL220 Genetics (B)

Other requirements:

The student must be able to work with and around others and maintain concentration. This is a busy lab and it is likely that the student won't ever be alone in the lab.

Notes to applicants (i.e., any other information you'd like applicants to know about you or the position before applying):

If schedules allow, the lab group has regular 1 hour weekly lab meeting to discuss research or journal articles. This is part of the 9 hour commitment unless there is a course conflict. The meeting time is set when all of the lab members' schedules are known (often it has been noon-1).