



Undergraduate Research
University of Missouri

Life Sciences Undergraduate Research Opportunity Program (LS UROP)

Summer 2019 and 2019-20 Academic Year

Application Information

Background

The Life Sciences Undergraduate Research Opportunity Program (LS UROP) is pleased to announce its internships for 2019-2020. Interns will participate in theoretical and/or applied life science research with MU faculty mentors in the field or in a laboratory.

Students must make arrangements with a faculty mentor prior to submitting an application. Those planning to enter masters or doctorate level programs in the life sciences or considering a research career in the life sciences are strongly encouraged to apply.

Faculty mentors conduct life science research in a variety of colleges, schools, and departments including Agriculture, Animal Sciences, Biochemistry, Fisheries & Wildlife, Forestry, Plant Sciences, Biological Sciences, Chemistry, Physics, Medicine & Surgery, Pathobiology, Microbiology and Immunology, Ophthalmology, Anatomical Sciences, Nutritional Sciences, and Bioengineering. There are also many interdisciplinary programs including the Dalton Cardiovascular Research Center, the Food for the 21st Century Program, Interdisciplinary Plant Group, Neurosciences, Genetics Area Program, and the Conservation Biology Program. Students should check **department's websites** for faculty research areas.

Summer Program

Summer interns conduct research on campus with a faculty mentor for a minimum of nine weeks (**May 29-July 28, 2019**). However, we encourage interns to begin their projects earlier. A mandatory summer orientation session is on **Wednesday, May 30** and the program culminates with a required poster session on **July 25**. This is a full-time research program. In addition to lab work, interns are required to attend evening seminars and small group workshops throughout the program.

Students are not allowed to enroll in coursework while participating in the program. (Permission for another class may be granted in **extremely rare cases**. Approval to be enrolled in coursework must be obtained before accepting the internship.) However, interns are encouraged to register for research credit with their LS UROP mentor as their instructor. The program does not cover enrollment fees or educational expenses. Summer interns receive a **\$4,000 stipend** paid in two installments. LS UROP students may not accept funding from another source during the internship.

Academic Year Program

Academic Year interns conduct research on campus with a faculty mentor for an average of 15 hours/week during both the fall and spring semesters. Interns are required to present a research poster at the Undergraduate Research and Creative Achievements Forum in April 2019.

Interns receive a **\$3,000 stipend**, paid in four installments. Students may enroll in 3 hours of research credit through their major department each semester. LS UROP does not cover enrollment fees and educational expenses. LS UROP students may not accept research funding from another source during the internship.

Eligibility

Applicants must be students who have completed two or more semesters at MU prior to the internship. Students graduating before May 2020 are ineligible for academic year funding, and those graduating before August 2020 are ineligible for any LS UROP funding. Freshmen must have worked with a mentor for three or

more months before the application deadline. Students who have received prior LS UROP funding may apply again; however, will not be given priority. Students do not have to major in a life sciences discipline; however, the committee expects a strong interest in the life sciences shown through coursework and experiences.

Funding Limitations: In order to support research opportunities for the most students, we are limiting the amount of LS UROP funding awarded to an individual student. Students will not receive LS UROP support for more than one summer and one academic year. Therefore students may apply in February for the upcoming summer and following academic year (ie, Summer 2019 and Academic Year 2019-2020). Or they may apply in February 2019 for the upcoming academic year (2019-2020) and then submit a new application in February 2020 to be considered for the Summer of 2020. Students will not be funded for two summers, nor for two academic years. Students may still apply only for funding in the summer or only for funding during the academic year.

Selection & Notification

On average, it takes four to six weeks to review applications and make final selections. As soon as decisions are made, we will contact students by MU e-mail. Regardless of status, all applicants and mentors will receive official notification. We expect to **fund 10 students** for summer and **10** for the academic year. Some applicants may be funded for both.

Stipends

Academic Year stipends will be processed through the MU Office of Financial Aid and calculated into the student's overall scholarships. The stipend may impact the overall financial aid package. Students are encouraged to talk to their financial aid advisor before accepting the internship. If a student is an intercollegiate athlete, the stipend may impact athletic scholarships or eligibility. After Financial Aid processes the stipend, the payment will be placed in the student's MU account. If there are any outstanding payments owed to the University (bookstore charges, housing, parking tickets, etc.), the Cashier's Office will pay these bills with the stipend before a payment is issued.

Summer Interns: If a student is enrolled in a research credit hour, the stipend will be processed through Financial Aid as above. If a student is not enrolled in a research credit hour, the stipend will be processed through the Accounting Office and will be subject to taxes on 2019 tax forms.

Finding a Mentor & Developing a Project

Students are encouraged to consider faculty mentors both within and outside of their major. The mentor must be able to guide the student in the development of a project and in the student's research. Some projects are best served by co-mentors. In that case, students must choose a primary mentor but obtain recommendation letters from both. There is no limit to the number of students one faculty member may mentor. However, in the recommendation letter, the mentor must clearly rank the students applying to work under his/her mentorship.

A student's project may be inspired by a course taken, research of the mentor, or an idea of their own. Project proposals should be developed and written by the student even if the idea was the mentor's. Together, the student and mentor should agree on the nature and scope of the project, the method of inquiry, a timetable, and the means by which the student will meet their personal goals. The project should be hypothesis-driven and provide educational experiences.

To Apply:

Step 1: Find a mentor and develop a project
Step 2: Complete application materials
Step 3: Request letters of recommendation

LS UROP Workshops

Tuesday, January 22, 2019, 4:00 p.m.

Monday, January 28, 2019, 4:00 p.m.

Locations to be confirmed; check UGR website.

Any questions regarding your application or the application process can be directed to **Jenn Brown** at BrownJen@missouri.edu or (573) 882-4818.

More information & supplemental materials: undergradresearch.missouri.edu/lసుop

Application Materials Information

Applications and recommendation letters must be submitted by email to ugr@missouri.edu by **Monday, February 18, 2019 at 2:00 p.m.**

Application packets must include:

1) **The two-page application form**

- Must be typed (fillable PDF)
- Prior experience should include the time period; your mentor; if you received academic credit, wages, or stipend; how much you worked; and if it was part of a formal internship program. Lab jobs can also be listed here.

2) **Project Proposal**

- 2 pages, single spaced, 12 pt. font
- Title of your project (6-20 words)
- Introduction of the topic and the problem, the big picture, and why the topic is significant to the life sciences
- Clear questions or hypotheses to be tested
- A description and explanation of research approaches, information to be collected, planned analyses, and activities to be accomplished during the internship -- not detailed techniques or protocols
- What you believe your results may yield
- How you will contribute to the project
- Citations of 3-5 articles in your proposal and a reference list at the end. Students are expected to read appropriate journal articles related to their project.

Visit Undergraduate Research in 150 Bond Life Sciences Center to see sample project proposals.

3) If your project is not in life sciences (i.e. physics, engineering or chemistry), provide an **additional statement** on the relationship between your project and the life sciences

4) A **personal statement** relating your internship to future career goals

- 1 page, single spaced, 12 pt. font

5) A current **Student Academic Profile**, including Fall 2018 grades found on MyZou

- Instructions on how to obtain this can be found on the LS UROP page of our website

6) A **resume** is not required, but is encouraged

All of the above materials should be submitted as one PDF document. You can combine files in Adobe Acrobat, Preview, or the CamScanner app (more information and instruction at undergradresearch.missouri.edu/lisurop).

7) **Faculty mentor information form**

- Separate form available on our website, to be filled out by your faculty mentor

8) At least **two letters of recommendation**

- One letter must be from your research mentor, to be submitted along with their faculty mentor information form.
- Your second letter should be from a science faculty member with whom you have taken a class or have worked. No TAs, lab techs, or non-science faculty.
- You may include a third letter and it may be from non-science faculty, a staff member, etc.
- If you have research experience in the past year, your supervisor there must provide a letter of recommendation or you may explain why you didn't obtain one.
- Letter writers should be able to describe your interest in the life sciences, your potential as a researcher, and your critical thinking skills.