Plant and Microbial Bioscience for a Sustainable Future: NSF-REU at Washington University in St. Louis

2027 Program Dates: 26 May 2027 to 4 August 2027

https://biology.wustl.edu/national-science-foundation-research-experiences-undergraduate-students-nsf-reu

Harnessing plants and microbes for sustainable solutions is essential to meet challenges presented by expanding populations, increased urbanization, and climate change - this effort requires a new breed of STEM student and professional. Located at Washington University in St. Louis, this REU provides foundational training for undergraduates interested in translating basic science discoveries to real-world applications and for fostering the next generation of broadly prepared STEM professionals. Students in the 10-week program join research groups in the Departments of Biology and Chemistry for projects exploring plant and microbial bioscience from foundational discovery to real-world applications. Research approaches range from the molecular/cellular to genomes/organismal to systems/environment. The program also delivers personal and professional development in a tiered mentoring community. Three pathways - Research Competencies, Graduate Admissions, and Biotech - provide professional and career support for all interns, as well as training in the safe, ethical, and rigorous conduct of research. There are also many opportunities to explore St. Louis.

Who Should Apply

The program is open to rising sophomore, junior and senior undergraduates with interests in understanding how plants and microbes function, how to apply that knowledge for a sustainable future, and looking ahead to careers in this area of science. Applicants must be US citizens, US nationals, or permanent residents of the US. WashU students are not eligible for the program.

Program Faculty and Research Areas

*Please see the website for links to each lab and their research:

Plants - Profs. Ram Dixit, Michael Landis, Kenneth Olsen, Xuehua Zhong

Microbes - Profs. Joshua Blodgett, Arpita Bose, Petra Levin, Elizabeth Mallott, Courtney Reichhardt, Timothy Wencewicz, Hani Zaher

Plants & Microbes - Profs. Kevin Cox, Joseph Jez, Barbara Kunkel, Ben Mansfeld, Himadri Pakrasi, Rachel Penczykowski

Financial Support

Stipends ($7000 for the 10-week session), travel expenses (to/from St. Louis), and room & board (apartment-style accommodations on campus & food allowance ($2000 for the 10-week session) are provided.

Application

All applicants should use the online NSF-ETAP portal (https://etap.nsf.gov/applicant-info) for submitting their application. **Application Deadline: 12 February 2027.**

Applications should complete required NSF-ETAP information and upload the following: personal statement, CV/resume, transcript, 2 letters of reference. Applicants will also be asked to enter the names of *5 program faculty* in ETAP. More information is available on the ETAP portal.

Program Contacts

Prof. Joseph Jez (jjez@wustl.edu) and Dr. Anthony Smith (anthony.j.smith@wustl.edu)

