NSF RESEARCH EXPERIENCE FOR UNDERGRADUATES (REU)

The National Science Foundation Research Experience for Undergraduates (NSF/REU) program supports active research participation by undergraduate students in any of the areas of research funded by NSF. REU projects involve students in meaningful ways in ongoing research programs or in research projects specifically designed for the REU program.

Undergraduate student participants in either REU Sites or REU Supplements must be U.S. citizens, U.S. nationals, or permanent residents of the United States.

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Co-Principle Investigator: Joseph V. Martin

The Center for Computational & Integrative Biology
SUMMER PROGRAM in
COMPUTATIONAL BIOLOGY
Research Experiences for Undergraduates (REU) Program

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OVERVIEW

The Computational Biology Summer Program provides meaningful summer research experiences to ten undergraduate students and combines experimental, theoretical, and computational approaches with a focus on the intersection of the mathematical, computational, and biological sciences. In addition to the research experience, students receive computational biology training, professional skills development, and enrichment sessions geared towards broadening their understanding of the application of, and issues surrounding, scientific research. Faculty and post-graduate mentors guide the research projects and advise students toward further study and career development.

Intellectual Focus

The central theme linking research projects will be the modeling of biological systems — ecological, physiological, and molecular. More precisely, we will focus on four main research projects, each involving multi-departmental collaboration.

Each project will start from generally-stated scientific questions and faculty mentors will guide REU students to critically examine the question (providing them with foundational knowledge and skills as needed), formulate hypotheses, design experiments, and interpret results for the verification of the hypotheses and the formulation of valid alternatives when possible.

PROGRAM GOALS

1. Introduce students interested in pursuing a science major to an integrated approach to research that incorporates the biological sciences, mathematics, computer science, chemistry, and physics.

2. Provide students with tangible academic, professional, and research-related skills.

3. Provide students with insights as to the application of scientific research to global issues and societal needs.

4. Foster a collaborative environment that encourages discovery and innovation.

5. Expose students to areas of relevance to scientific research and development such as ethical conduct of research, regulatory issues, technology transfer and licensing, entrepreneurship, venture finance, and quality assurance.

6. Equip participants with the knowledge to decide whether they wish to further pursue computational biology and/or a career in scientific research.

APPLICATION PROCESS

The Computational Biology Summer Program accepts ten students each year. Each student will receive room and board plus a $5,000 stipend.

Eligibility Criteria

Applicants:
- Must be enrolled in a post-secondary program of education (community college, adult education, degree completion program, or a traditional 4 year college)
- Must have maintained a cumulative 3.0 GPA
- Must have completed at least one undergraduate science course
- Are strongly encouraged to participate in the residential component of the program

Veterans are particularly encouraged to apply.

"I really like it; I like the whole trial and error and [how] everything's organized in steps, how you make yourself a schedule . . . I really like research right now."
Sarah Kamal, 20, Camden County College

For More Information

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Submit Your Application Online

http://ccib.camden.rutgers.edu/reu/2015-reu-application/