

Opportunity Title: Biochem Lab Support

Opportunity Reference Code: EPA-NSSC-0005-05-4-19-23

Organization U.S. Environmental Protection Agency (EPA)

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How to Apply Click [HERE](#) to Apply

Description The EPA National Student Services Contract has an immediate opening for a full time Biochem Lab Support position with the Office of Research and Development at the EPA facility in Chapel Hill, NC.

The Office of Research and Development at the EPA supports high-quality research to improve the scientific basis for decisions on national environmental issues and help EPA achieve its environmental goals. Research is conducted in a broad range of environmental areas by scientists in EPA laboratories and at universities across the country.

What the EPA project is about

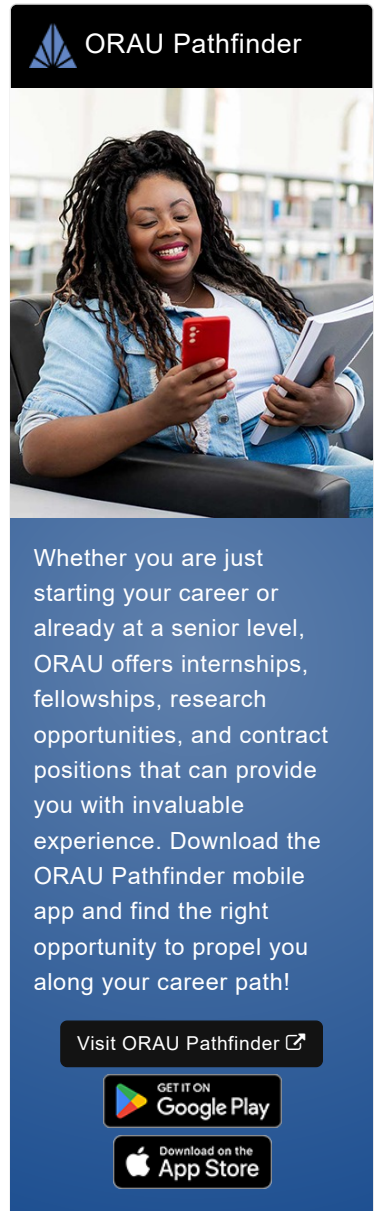
The Center for Public Health and Environmental Assessment (CPHEA) provides the science needed to understand the complex interrelationship between people and nature in support of assessments and policy to protect human health and ecological integrity. Within CPHEA, the Public Health and Integrated Toxicology Division (PHITD) performs clinical and animal toxicological research to assess the impact of environmental exposures on human health by developing and validating biological measures in all aspects of human health to better link exposure, dose, and health outcomes. This includes evaluating toxicological mechanisms and responses for target organ systems using multiple strategies related to chemical screening and prioritization including assessing in vivo predictive value of in vitro tests and test methods development and interpretation.


Some division investigators conduct clinical studies involving human volunteers to determine the effects of exposure to ambient pollution on human health and elucidate the mechanisms through which these effects occur. Studies are conducted in close consultation with client offices in order to support the regulatory activities of the Agency.

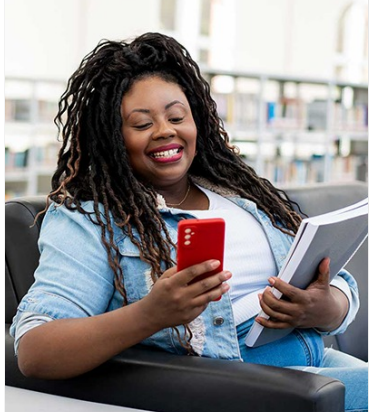
What experience and skills will you gain?

As a team member, your work will include general laboratory duties as well as project-based tasks. Specifically, you will assist in laboratory experiments aimed at identifying molecular and epigenetic mechanisms associated with adverse outcomes of pollutant exposure and biomarkers of susceptibility to the effects of pollutant exposure. You will also assist in the development of *in vitro* methods for studying pollutant exposures.


You will conduct *in vitro* pollutant exposures, examine epigenetic modifications, assay gene and protein expression and function, maintain cell cultures, genotype samples, and assist with clinical study operations and sample processing. You will also be expected to provide researcher support and contribute to project planning, data analyses, and communicate scientific findings in scientific journals and conferences.





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Through participation, you will learn a variety of fundamental and specialized biochemical and molecular techniques, as well as gain experience in translational clinical research studies. In addition, you will learn how to design and manage studies to address scientific questions, and how to prioritize, sequence, and troubleshoot experiments in order to maximize efficiency and productivity.

You will work side by side with trainees at various stages of their doctoral studies or postdoctoral fellowship and thus be exposed to advanced instruction in the planning and execution of laboratory protocols, including data analysis methods. In addition, you will attend regular staff meetings in which findings and related scientific principles are presented and discussed.

Communications-related responsibilities:

- Participate as a member of a multi-disciplinary research team;
- Interact with other members of the development team as well as EPA scientists; and
- May be asked to present work performed as a poster at a scientific conference.

Required Knowledge, Skills, Work Experience, and Education

- Proficiency with general laboratory skills in a research laboratory setting outside the classroom, including: performing chemistry calculations (molarity), preparing solutions, pipetting, maintaining a scientific notebook, and electronic record keeping;
- Completed undergraduate courses (courses with lecture and laboratory components count as one course) in at least three of the following topics and received a grade of "B" or higher: general biology, molecular biology, genetics, microbiology, biochemistry, or toxicology;
- At least six months of mentor-directed laboratory research experience in biological science outside the classroom;
- Proficiency in polymerase chain reaction (PCR) in a research laboratory setting outside the classroom;
- Proficiency performing searches of the scientific literature using databases including PubMed; and
- Proficiency with Microsoft Word, Excel, and PowerPoint software.

Desired Knowledge, Skills, Work Experience, and Education

- Hands-on experience in RNA isolation, cDNA synthesis, and quantitative PCR in a research laboratory setting;
- Hands-on experience culturing mammalian cell lines in a laboratory setting;
- Hands-on experience with basic molecular biology techniques such as

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plasmid preparations, transfections and gel electrophoresis;

- Hands-on experience conducting chromatin immunoprecipitation (ChIP) assays and associated quantitative PCR and data analysis in a laboratory setting; and
- Hands-on experience in Western blotting in a laboratory setting.

Location: This job will be located EPA's facility in Chapel Hill, NC.

Salary: Selected applicant will become a temporary employee of ORAU and will receive an hourly wage of \$23.37 for hours worked.

Hours: Full-time.

Travel: Occasional local travel may be required. Occasional overnight travel to scientific meetings to present research may also be required.

Expected start date: The position is full time and expected to begin May 2023. The selected applicant will become a temporary employee of ORAU working as a contractor to EPA. The contract renews each May through 2025.

For more information, contact EPANSSC@orau.org. Do not contact EPA directly.

- Qualifications**
- Be at least 18 years of age **and**
 - Have earned at least Bachelor of Science degree in biology, cell biology, biochemistry, molecular biology, or closely related field of biological science from an accredited university or college within the last 24 months **and**
 - Be a citizen of the United States of America or a Legal Permanent Resident.

EPA ORD employees, their spouses, and children are not eligible to participate in this program.

- Eligibility Requirements**
- **Citizenship:** LPR or U.S. Citizen
 - **Degree:** Bachelor's Degree received within the last 24 month(s).
 - **Overall GPA:** 2.00
 - **Discipline(s):**
 - **Life Health and Medical Sciences** ([48](#))

Affirmation I certify that I am at least 18 years of age; a recent graduate with at least a Bachelor of Science degree in biology, cell biology, biochemistry, molecular biology, or closely related field of biological science from an accredited university or college within the last 24 months; a citizen or a Legal Permanent Resident of the United States of America; and not a current employee of EPA ORD or the spouse or child of an EPA ORD employee.

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required employment notices.