Opportunity Title: Ph.D. Laboratory Scientist
Opportunity Reference Code: EPA-NSSC-0007-91

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 Ph.D. Laboratory Scientist position with the Office of Research and Development at the EPA facility in Research Triangle Park, 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 Environmental Measurement and Modeling (CEMM) provides scientific expertise and leadership in the development and application of complex methods to collect environmental measures and computational models that provide precise and detailed predictions of the activity of contaminants in the environment. Within CEMM, the Watershed and Ecosystem Characterization Division (WECD) conducts research to advance EPA's ability to characterize the presence, transport, transformation, sources, and impacts of contaminants in watersheds and ecological systems.

CEMM/WECD scientists develop methods to measure chemical and microbial pollutants in a variety of environmental media (soil, dust, water, and other biota) to support implementation of the Toxic Substances Control Act (TSCA), the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, also known as Superfund), the Resource Conservation and Recovery Act (RCRA), Clean Water Act (CWA), Safe Drinking Water Act (SDWA), the Harmful Algal Bloom and Hypoxia Research and Control Act, the Beach Act and other environmental statues. In addition, WECD conducts ecological monitoring of chemical and biological stressors at multiple scales to characterize the condition of environmental systems through the development and application of novel field indicators, environmental genomics, and geospatial tools. Finally, WECD develops, evaluates, and applies watershed management tools to characterize both ecological response and economic benefits. The methods, tools, and technologies inform effective watershed management practices as well as minimize health risks to various chemical and microbial contaminants.

What experience and skills will you gain?

As a team member, you will assist EPA in conducting research to develop methods to analyze residential use pesticides and per-fluorinated chemicals from residential dwellings using hard surface wipe samples collected from the American Healthy Homes Survey II (AHHS II). You will work to develop

and apply methods that will provide instrument parameters, standard and analyte selection, hard surface wipe method validation and determine chemical concentrations for pesticides and perfluorinated chemical compounds derived from field collected hard surface wipe samples.

The team member will use analytical chemistry techniques such as: solid phase extraction (SPE), gel permeation chromatography (GPC), high resolution mass spectrometry (UHPLC-QTOF), and gas chromatography-mass spectrometry to derive environmental concentrations.

Analytical and Laboratory support tasks will include:

- Maintaining, managing, and organizing laboratory facilities, samples, supplies and reagents;
- Preparation of standard solvents and solutions;
- Routine instrument calibrations;
- Logging of environmental samples;
- Processing of received field collected samples in preparation for chemical analysis by LC-MS or GC-MS analysis;
- Conducting experiments to validate surface wiping transfer efficiencies;
- Conducting experiments using liquid and gas chromatography and mass spectrometry methods. Experiments will be planned by consulting with research investigators regarding sample preparation, analyte detection and quantification, and data analysis methods;
- Maintaining records and documentation associated with the conduct of these experiments, in accordance with Quality Assurance plans;
- Maintaining quality control over all processes; and
- Preparation of preliminary analysis of experimental results and data summaries.

Communications-related responsibilities will include:

- Participating as a member of a multi-disciplinary EPA research team;
- Interacting with other members of the development team as well as EPA scientists;
- Presenting work performed at a scientific conference as required; and
- Demonstrated publication record and ability to translate laboratory data to published findings.

Required Knowledge, Skills, Work Experience, and Education

- Demonstrated education and/or experience performing quantitative chemical analysis including laboratory procedures such as dilutions, pipetting, sample extractions, chromatography, and/or mass spectrometry;
- A working knowledge of physiochemical separation by liquid/gas chromatography and detection by mass spectrometry;
- It is expected that the participant will be highly competent with the function and processes of an analytical laboratory including safety and QA/QC practices and data management and manipulation, including statistical analysis;
- Experience using at least one of the following: statistical software,

Microsoft Word, Microsoft Excel, to summarize and manipulate data files, manage data, prepare graphics, and conduct basic and advanced data analysis;
- Prior experience working with environmental and/or biological sample; and
- Strong written, oral, and electronic communication skills. Demonstrated competency through authored publication(s), reports, and presentations in a related research area.

Location: This job will be located EPA's facility in Research Triangle Park, NC.

Salary: Selected applicant will become a temporary employee of ORAU and will receive an hourly wage of $45.06 for hours worked.

Hours: Full-time.

Travel: Occasional overnight travel may be required.

Expected start date: The position is full time and expected to begin August 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 a Ph.D. degree in the fields of biology, chemistry, bioinformatics, toxicology, environmental science, or a closely related field of study 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:** Doctoral Degree received within the last 24 month(s).
- **Overall GPA:** 2.00
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (1 👁)
  - **Environmental and Marine Sciences** (1 👁)
  - **Life Health and Medical Sciences** (3 👁)

Affirmation

I certify that I am at least 18 years of age; a recent graduate with at least a Ph.D. degree in the fields of biology, chemistry, bioinformatics, toxicology, environmental science, or a closely related field of study from an accredited university or college within the last 24 months; a citizen or a Legal

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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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