

Opportunity Title: EPA Chemist/Physical Scientist Internships with Emphasis in Analytical Chemistry

Opportunity Reference Code: EPA-ORD-CCTE-CCED-2023-04

Organization U.S. Environmental Protection Agency (EPA)

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A complete application consists of:

- An application
- Transcript(s) – For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. All transcripts must be in English or include an official English translation. Click [here](#) for detailed information about acceptable transcripts.
- A current resume/CV, including academic history, employment history, relevant experiences, and publication list
- Two educational or professional recommendations. Click [here](#) for detailed information about recommendations.

All documents must be in English or include an official English translation.

Application Deadline 7/7/2023 3:00:00 PM Eastern Time Zone

Description ***Applications may be reviewed on a rolling-basis and this posting could close before the deadline.** Click [here](#) for information about the selection process.

EPA Office/Lab and Location: A research opportunity is available at the Environmental Protection Agency (EPA), Office of Research and Development (ORD), Center for Computational Toxicology and Exposure (CCTE), Chemical Characterization & Exposure Division (CCED) located in Research Triangle Park, North Carolina.

Research Project: The research participant will collaborate with the Center for Computational Toxicology and Exposure (CCTE) and the Center for Public Health and Environmental Assessment (CPHEA) scientists to investigate, develop, and implement new bioanalytical chemistry methods to identify and quantify changes in biological systems related to exposure to chemicals of potential environmental concern. The research aims to improve sensitivity for the detection of exogenous and endogenous analytes, expand detection capability to complex tissue matrices, and broaden methods to include multiple chemicals from diverse classes in a single analysis.


Under the guidance of a mentor, the participant's analytical and laboratory activities will include:


- General laboratory support, including reagent control, waste management, and sample custody
- Preparation of a variety of sample matrices (water, tissue, biofluids) for analysis
- Preparation of calibration standards, matrix-matched calibrations, and quality control samples




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- Development and performance of extraction methods
- Instrumental analytical method development and implementation using GC/MS, GC/MS/MS, and LC/MS/MS
- Routine analytical instrument maintenance
- Documentation of laboratory and research activities in accordance with standard quality assurance practices
- Strict adherence to safety rules and procedures for conducting laboratory research

Other research activities may include:

- Participating as a member of a multi-disciplinary research team
- Assisting in organizing research records
- Assisting in summary analysis documents of results and impacts from data analyses
- Assisting in writing study results in manuscripts, presentations, and fact sheets
- May be asked to present research performed as a poster at a scientific conference

Learning Objectives:

- Understanding of research laboratory operations as a system
- Knowledge of quality control and method validation procedures
- Understanding of analytically appropriate sample preparation techniques
- Ability to optimize instrument performance for analyses of interest
- Ability to operate LC/MS/MS and GC/MS instrumentation independently
- Ability to troubleshoot instrument performance issues

Mentor(s): The mentor(s) for this opportunity is Jermaine Ford (ford.jermaine@epa.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: May 1, 2023. All start dates are flexible and vary depending on numerous factors. Click [here](#) for detailed information about start dates.

Appointment Length: The appointment will initially be for one year and may be renewed upon EPA recommendation and subject to availability of funding.

Level of Participation: The appointment is full-time.

Participant Stipend: The participant will receive a monthly stipend commensurate with educational level and experience. Click [here](#) for detailed information about full-time stipends.

EPA Security Clearance: Completion of a successful background investigation by the Office of Personnel Management (OPM) is required for an applicant to be on-boarded at EPA.

ORISE Information: This program, administered by ORAU through its contract with the U.S. Department of Energy (DOE) to manage the Oak

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Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and EPA. Participants do not become employees of EPA, DOE or the program administrator, and there are no employment-related benefits. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE.

ORISE offers all ORISE EPA graduate students and Postdocs a free 5 year membership to the National Postdoctoral Association (NPA).






The successful applicant(s) will be required to comply with Environmental, Safety and Health (ES&H) requirements of the hosting facility, including but not limited to, COVID-19 requirements (e.g. facial covering, physical distancing, testing, vaccination).

Questions: Please see the [FAQ section](#) of our website. After reading, if you have additional questions about the application process please email ORISE.EPA.ORD@orau.org and include the reference code for this opportunity.

Qualifications The qualified candidate should have received a bachelor's degree in one of the relevant fields (e.g. Chemistry, Biochemistry, emphasis in Analytical Chemistry). Degree must have been received within five years of the appointment start date or currently pursuing with degree to be received by June 30, 2023.

Preferred Skills:

- Familiarity with general laboratory operations and safety practices
- A working knowledge of the following equipment and procedures: automated sample preparation equipment, solvent evaporation units, homogenizers, and centrifuges, HPLC, GC, mass spectrometry, and wet chemistry
- Experience with use of computer software packages, including Microsoft Office (Excel, Word, and PowerPoint), LIMS software, electronic notebooks, and instrument control software
- Technical writing skills, including the ability to create detailed method documentation and keep accurate and complete laboratory records

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
 - **Degree:** Bachelor's Degree received within the last 60 months or anticipated to be received by 6/30/2023 11:59:00 PM.
 - **Discipline(s):**
 - **Chemistry and Materials Sciences** ([12](#) )
 - **Engineering** ([2](#) )
 - **Environmental and Marine Sciences** ([14](#) )
 - **Life Health and Medical Sciences** ([48](#) )
 - **Physics** ([1](#) )