Opportunity Title: EPA Analytical Chemistry Fellowship
Opportunity Reference Code: EPA-OECA-2021-01

Organization	U.S. Environmental Protection Agency (EPA)
Reference Code	EPA-OECA-2021-01
How to Apply	***Connect with ORISE...on the GO!*** Download the new ORISE GO mobile app in the Apple App Store or Google Play Store to help you stay engaged, connected, and informed during your ORISE experience and beyond!

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	10/21/2021 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 with the U.S. Environmental Protection Agency's (EPA), Office of Enforcement and Compliance Assurance (OECA), National Enforcement Investigations Center (NEIC) located in Lakewood, Colorado.

The National Enforcement Investigation Center (NEIC) is the environmental forensics center for EPA's enforcement programs. NEIC's Laboratory Branch provides analytical services in support of EPA's enforcement program.

Research Project: The research project at EPA's environmental forensics laboratory may include developing data processing approaches, leading method development activities, and creating instrument specific libraries for Per- and polyfluorinated alkyl substances (PFAS). This project could include:

- Developing automated data processing tools to increase sample throughput and productivity. Data acquisition is through instrument manufacturers' software (Agilent or ThermoFisher). The participant will utilize Excel, R Studio, or other programs and development tools to automate data processing and quality checks. The automated data processing should include streamlined data entry from acquisition to the laboratory information management

system (Promium Element).

- Leading the development and validation of methods for analysis of PFAS compounds in soil, water, and air.
- Creating mass spectral instrument specific libraries for PFAS compounds (which may present collaboration opportunities with EPA's Office of Research and Development).
- Developing expanded uncertainty approaches which encompass quality control results (calibration verifications, replicates, spikes) for overall methodology and/or individual batches

Learning Objectives: Through this training, the participant may gain an in-depth knowledge of all aspects of EPA's environmental forensic chemistry program and an appreciation of the challenges presented by this research effort. The participant may obtain specific knowledge of PFAS compounds, and how EPA works to develop and/or refine analytical approaches to detect and quantify emerging contaminants of concern.
The participant can anticipate learning:

- How to optimize data processing approaches to build efficiencies and result in time savings from analysis to reporting of PFAS compounds.
- How to lead a special project investigation of an alternative or new analytical method. This will also involve validation of those methods.
- How to create instrument specific libraries of emerging chemicals of concern at an environmental forensic laboratory.

Mentor(s): The mentor for questions about this opportunity is David Bright (bright.david@epa.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: no later than January 15, 2022. All start dates are flexible and vary depending on numerous factors. Click **here** for detailed information about start dates.

Appointment Length: The appointment may initially be for one year and may be renewed up to three additional years 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. **The annual stipend will range from $60,000 to $72,000, depending on education and experience.**

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 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).

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

Qualifications

The qualified candidate should have received a master's or doctoral degree in one of the relevant fields, or be currently pursuing a doctoral degree. Degree must have been received within the past five years.

Preferred skills and experience that would enhance this research experience include:

- Familiarity with instrument software systems, e.g., Agilent, ThermoFisher, etc.
- Familiarity with laboratory information management systems, e.g., Promium Element
- Experience with liquid chromatographs coupled to triple quadrupole and high-resolution mass spectrometers and supporting equipment
- Technical and scientific writing abilities
- Familiarity with the design of experiments
- Presentation skills
- Familiarity with Microsoft Office software
- Familiarity with data automation tools and programs such as R studio and Python

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Master's Degree or Doctoral Degree.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (4 👁)
  - **Computer, Information, and Data Sciences** (1 👁)
  - **Environmental and Marine Sciences** (2 👁)
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).

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Affirmation   I have received a master's or doctoral degree within the past five
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