Opportunity Title: Assessing Environmental Fate and Transformation of Novel PFAS
Opportunity Reference Code: EPA-ORD-NERL-EMMD-2019-14

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-ORD-NERL-EMMD-2019-14

How to Apply 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

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

If you have questions, send an email to EPArpp@orau.org. Please include the reference code for this opportunity in your email.

Application Deadline 11/4/2019 3:00:00 PM Eastern Time Zone

Description ***Applications will be reviewed on a rolling-basis.**

A research opportunity is available with the Environmental Protection Agency's (EPA) Office of Research and Development (ORD), National Exposure Research Laboratory (NERL), Exposure Methods & Measurements Division (EMMD) located in Athens, Georgia.

The research project is to assess environmental fate (transformation and transport) of the new generation of novel per- and polyfluorinated alkyl substances (PFASs, e.g., perfluoro polyethers). The EPA/Athens lab has substantial capabilities in extraction of PFASs from a wide array of environmental matrices including surface and subsurface soils, sediments, vegetative and animal tissue, biosolids, polymers and other commercial products. State of the art analytical instrumentation includes LC/QTOF for nontargeted analyses, LC/MS/MS and GC/MS. This laboratory has reported analytical results for roughly 100 analytes, some not reported by any other laboratory in peer-reviewed literature as far as we have determined.

Generally, degradation experiments might include hydrolysis, including at extreme pHs and/or elevated temperatures to bolster reaction rate, and biodegradation in soils or sediments. Environmental mobility might be assessed with sorption experiments on natural soils/sediments and/or specific environmental fractions such as natural organic matter and ferric-hydroxide minerals.

With guidance from mentors and collaborating scientists, the participant may be involved in the following training activities:

- team laboratory experiments
- nontargeted analysis for degradation products in experimental samples and unknown compounds in environmental samples on LC/QTOF
- targeted analysis for degradation products in experimental samples and QTOF-identified compounds in environmental samples on LC/MS/MS
- targeted analysis for known compounds in environmental samples on GC/MS
- reporting upon efforts in completing the above activities for scientific papers

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The participant may learn to apply their creativity and intellect toward solving complex problems and generating ideas for further research. The research participant will learn how to interact with an interdisciplinary research team with expertise in chemistry, toxicology, microbiology, environmental modeling and software engineering. The research participant may also have the opportunity to further develop their technical skills, analytical capability, and communication skills. The research participant will learn scientific writing skills to present and publish research data within a team environment. This team is presently striving towards the development and application of a suite of software tools that will provide the user with predicted reaction pathways, physicochemical properties, and transformation rates for Agency priority organic chemicals.

The mentor for this opportunity is John Washington (Washington.john@epa.gov).

Anticipated Appointment Start Date: November 4, 2019

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. The initial appointment is for one year, but may be renewed upon recommendation of EPA and is contingent on the availability of funds. The participant will receive a monthly stipend commensurate with educational level and experience. Proof of health insurance is required for participation in this program. The appointment is full-time in the Athens, Georgia, area. Participants do not become employees of EPA, DOE or the program administrator, and there are no employment-related benefits.

Completion of a successful background investigation by the Office of Personnel Management (OPM) is required for an applicant to be on-boarded at EPA. OPM can complete a background investigation only for individuals, including non-US Citizens, who have resided in the US for the past three years.

Qualifications

The qualified candidate should have received a bachelor's degree in one of the relevant fields, or be currently pursuing the degree and will reach completion by the appointment start date. Degree must have been received within five years of the appointment start date.

Preferred skills:

- Some general laboratory experience gained from college courses and similar activities
- Some experience with assisting in research

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Bachelor's Degree received within the last 60 months or anticipated to be received by 11/4/2019 11:59:00 PM.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (1)
  - **Engineering** (1)
  - **Environmental and Marine Sciences** (3)

Affirmation

I certify that I have lived in the United States for the past three years.