

Opportunity Title: EPA Fellowship for PFAS Biomonitoring Analyses to Inform New Approach Method Exposure Assessment

Opportunity Reference Code: EPA-ORD-CCTE-CCED-2022-05

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.

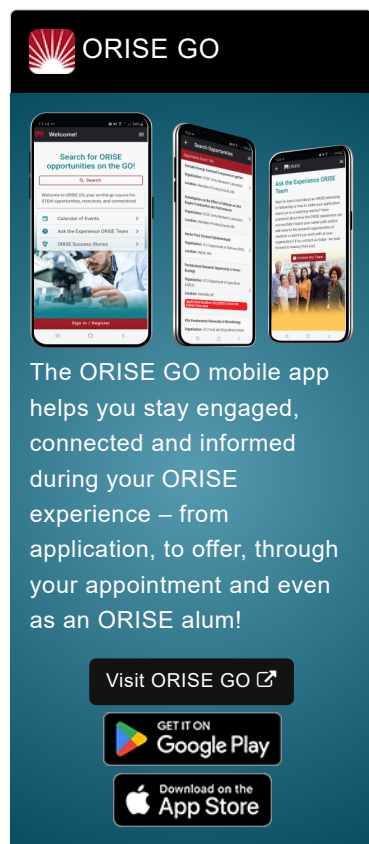
Application Deadline 3/31/2023 3:00:00 PM Eastern Time Zone

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 be an active collaborator with researchers within ORD who focus on the development of New Approach Methods (NAMs) to inform chemical assessments. NAMs represent methods and/or frameworks that incorporate in vitro experimental assays and in silico modeling to efficiently evaluate the large number of commercial chemicals in use in the United States that lack hazard and/or exposure data. Such approaches are used to efficiently predict doses at which effects maybe observed and parallel estimations of anticipated human exposures given expected use patterns. NAMs that incorporate high throughput toxicity screening data, toxicokinetics and exposure predictions have already been used to set chemical testing priorities in a process known as risk-based prioritization.

Concern over exposure to and potential health effects of per- and polyfluoroalkyl substances (PFAS) has increased significantly as more is learned about their widespread environmental presence, persistence and bioaccumulative potential. The limited measurement, monitoring, toxicokinetic and toxicologic data currently available is inadequate to inform risk evaluations across this diverse domain. This research project will use



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analytical chemistry methods to detect and quantify a large number of PFAS in blood samples of potentially exposed populations. These data will be compared against in vitro toxicity data that provide concentrations at which biological perturbations are observed to derive a margin of exposure: that is, the margin between the concentration at which effects are observed and the blood concentrations measured in exposed individuals. The resulting findings will be used to build a NAM, risk-based prioritization process to determine which PFAS are of most concern for follow-up investigation.

Learning Objectives: The research participant will be trained in the development and execution of a range of analytical chemistry methods to detect and quantitate PFAS in blood and potentially other biomonitoring samples. Use of targeted and non-targeted chemistry methods is likely to enable detection of PFAS, PFAS metabolites and degradation products. The research participant will be trained in the execution of in vitro toxicokinetic approaches to expand knowledge of PFAS biotransformation and toxicokinetics. The research participant will participate as a member of a fast-paced multi-disciplinary research team and will have opportunities to interact with internationally recognized leaders, both within and outside the EPA. The research participant will have the opportunity to contribute to and/or publish original research in this effort and to present research at scientific meetings or during seminars. In summary, this research opportunity will provide an early career scientist with knowledge, skills, and abilities needed to apply new technologies and associated data to regulatory decision-making.

Mentor(s): The mentor(s) for this opportunity is Barbara Wetmore (wetmore.barbara@epa.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: **October 31, 2022.** 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 up to three to four 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. 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 Ridge Institute for Science and Education (ORISE), was established

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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@ornl.gov 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 (e.g. Toxicology, Pharmacology, Biology, Chemistry, Cell Biology). Degree must have been received within five years of the appointment start date.

Preferred Skills:

- Strong written, oral, and electronic communication skills, with proficiency in Microsoft Office applications (i.e., Excel, PowerPoint, Word, Outlook) and experience working with spreadsheets. Experience developing and giving oral PowerPoint presentations is preferred.
- Laboratory experience including: following written protocols, keeping accurate laboratory records, and proficiency performing basic chemistry calculations, solution preparation and pipetting.
- Laboratory experience conducting targeted analytical chemistry techniques, such as method development, sample preparation, instrument usage (LC-MS/MS and/or GC-MS/MS), and data analysis would be highly valued
- Laboratory experience conducting in vitro experiments using a variety of methods and/or cell culture experience (i.e., experience in aseptic technique) would be a bonus
- Demonstrated ability to complete experiments in an organized and efficient manner with attention to detail and accurate recordkeeping
- Ability to work well with others in a laboratory environment and within a research team is preferred

- Eligibility**
- **Citizenship:** U.S. Citizen Only
- Requirements**
- **Degree:** Master's Degree or Doctoral Degree received within the last 60 month(s).
 - **Discipline(s):**
 - **Chemistry and Materials Sciences** ([1](#) )
 - **Life Health and Medical Sciences** ([18](#) )
 - **Mathematics and Statistics** ([1](#) )

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