Opportunity Title: EPA Ecological Monitoring via Metabolomics & Lipidomics Fellowship
Opportunity Reference Code: EPA-ORD-CEMM-EPD-2020-01

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-ORD-CEMM-EPD-2020-01

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 9/23/2020 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 Environmental Measurement & Modeling (CEMM), Ecosystems Processes Division (EPD), Chemical Processes and Systems Branch (CPSB) located in Athens, Georgia.

The Center for Environmental Measurement and Modeling (CEMM) conducts research to advance the Agency's ability to measure and model contaminants in the environment, including research to provide fundamental methods and models needed to implement environmental statutes.

Research Project: This research project is focused on applying metabolomics and lipidomics to understand how, when, and why aquatic stressors that arise from a variety of sources (e.g., agriculture, wastewater treatment, urban runoff) impact the biochemistry and overall health of a range of resident organisms (e.g., fish, invertebrates, algae). Under the guidance of a mentor, the research participant will collaborate with an interdisciplinary team dedicated to enhancing EPA's ability to monitor and prioritize aquatic stressors and/or mixtures of stressors and determining the potential risks that they pose to aquatic life.

Research Activities may include:

- field studies;
- collecting and extracting biological samples;
- sample analysis using high-resolution mass spectrometry and/or high-

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field NMR spectroscopy;
- use of chemometrics tools to mine relevant information from large datasets;
- incorporating metabolomic/lipidomic data into Adverse Outcome Pathway (AOP) frameworks to support the development of early indicators of effect(s) in ecologically-relevant biota.

Learning Objectives: Through engagement in this research project, the research participant may learn and develop capability and expertise in metabolomics/lipidomics as applied to environmental science. The research participant may have opportunities to give technical presentations at scientific conferences/workshops. The research participant may contribute to a manuscript(s), to be submitted to a peer-reviewed journal(s).

Mentor(s): The mentor for this opportunity is Drew Ekman (ekman.drew@epa.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: Fall 2020. 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 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 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.

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

Qualifications

The qualified candidate should have received a doctoral degree in one of the relevant fields.

Degree must have been received within five years of the appointment start date.

Preferred skills:

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- Experience with basic statistics and multivariate data analysis
- Excellent written and oral communication skills

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree received within the last 60 months or anticipated to be received by 9/30/2020 10:16:46 AM.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **Environmental and Marine Sciences** (12 👁)
  - **Life Health and Medical Sciences** (45 👁)
  - **Mathematics and Statistics** (10 👁)
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).