Opportunity Title: EPA Fellowship on Alternatives for Assessing Toxicity of Environmental Contaminants to Aquatic Organisms
Opportunity Reference Code: EPA-OCSPP-IO-2026-0011

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-OCSPP-IO-2026-0011

How to Apply ***To submit your application, scroll to the bottom of this opportunity and click APPLY.***

A complete application consists of:

- An application
- Transcripts – 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. Your application will be considered incomplete, and will not be reviewed until one recommendation is submitted.

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

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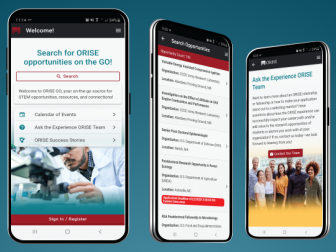
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Application Deadline 11/6/2026 3:00:00 PM Eastern Time Zone

Description ***Applications may be reviewed on a rolling-basis and this posting could close before the deadline.**

EPA Office/Lab and Location: A research opportunity is currently available at the Environmental Protection Agency (EPA), Office of Chemical Safety and Pollution Prevention (OCSPP), with the Andrew W. Breidenbach Environmental Research Center located in Cincinnati, Ohio.

The mission of EPA is to protect human health and the environment. EPA works to ensure that: Americans have clean air, land and water; National efforts to reduce environmental risks are based on the best available scientific information; Federal laws protecting human health and the environment are administered and enforced fairly, effectively and as Congress intended; Environmental stewardship is integral to U.S. policies concerning natural resources, human health, economic growth, energy, transportation, agriculture, industry, and international trade, and these factors are similarly considered in establishing environmental policy; All parts of society have access to accurate information sufficient to effectively participate in managing human health and environmental risks; Contaminated lands and toxic sites are cleaned up; and chemicals in the marketplace are reviewed for safety.

Research Project: Due to the large number of chemicals in commerce and subsequently introduced into the environment, chemical safety assessments based on traditional animal testing have been unable to keep pace with the need to generate hazard information to support screening, prioritization, and both human health and ecological risk assessment. To address

this, EPA's Office of Chemical Safety and Pollution Prevention is developing and evaluating alternative testing approaches (termed "new approach methodologies") for generating toxicity information in a more rapid and cost-effective manner while still providing data that are equivalent to or better than that derived from traditional testing. EPA's Risk Assessment Support Division is developing and applying high throughput test methods in which small aquatic organisms (e.g., embryo-larval fish, crustaceans, insect larva, aquatic plants and algae) are exposed to test chemicals. To further the interpretation of the results, you may also be engaged in literature review and hypothesis-driven studies that help establish causal relationships between perturbation of biological systems at the molecular and cellular level and adverse effects on individuals and/or populations.

With guidance from the mentor, you may be involved in any or all of the following training activities:

- Conducting laboratory exposures to organic chemicals using aquatic organisms including fish, invertebrates, and algae.
- Extracting biomolecules including DNA, RNA, endogenous metabolites, etc. from animal and plant tissues.
- Conducting molecular, biochemical, physiological, and/or histological analyses on biofluids and tissue samples collected from aquatic organisms.
- Screening chemicals or chemical mixtures for biological activity using a diversity of cell-free, cell-based, and/or high throughput testing approaches.
- Applying computational pipelines, bioinformatic approaches, statistical analyses, and quality assurance/quality control principles to complex biological data sets including those from "omics" technologies.
- Compiling and summarizing scientific information from the peer-reviewed literature and from on-line data sources.
- Conducting critical weight of evidence-based evaluations based on Bradford Hill considerations.
- Analyzing experimental data and generating tables, figures, and other summaries of results.
- Presenting research results at scientific meetings and contributing to peer-reviewed publications.

Learning Objectives: Through this appointment, you will:

- Learn a diversity of laboratory techniques which can be applied across life sciences research fields.
- Learn to operate and use a range of scientific equipment.
- Learn to engage with aquatic organisms, cell culture, and/or biochemical assays.
- Learn search strategies and tools to efficiently and transparently document literature retrieval and evaluation.
- Learn to evaluate data quality, trouble shoot research results, apply statistical methods for data analysis and interpretation.

You will be participating alongside a transdisciplinary research team and engage in multiple aspects of project planning, communication, research implementation, and analysis. You will be afforded an opportunity to interact with internationally recognized leaders, both within and outside EPA. Additionally, you will have the opportunity to contribute to original research and associated publications. It is expected that this training opportunity will provide you with knowledge, skills, and abilities needed to apply new technologies and associated data to regulatory decision-making at the local, national, and/or international scale and to a professional

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career in life sciences research.

Mentor(s): The mentor for this opportunity is Adam Biales (biales.adam@epa.gov). If you have questions about the nature of the research, please contact the mentor.

Anticipated Appointment Start Date: Fall/Winter 2026. All start dates are flexible and vary depending on numerous factors.

Appointment Length: The appointment will initially be for one year and may be renewed 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.

Citizenship Requirements: This opportunity is available to U.S. citizens and Lawful Permanent Residents (LPR) only.

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).

The successful applicant(s) will be required to comply with Environmental, Safety and Health (ES&H) requirements of the hosting facility.

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

Qualifications The qualified candidate should have received a bachelor's or master's degree in one of the relevant fields (e.g. biology, (eco)toxicology, biochemistry, molecular biology, genetics, bioinformatics, computational biology, computational chemistry, chemistry, or a related field). Degree must have been received within the past five years. Those currently pursuing a master's degree are also eligible to apply.

Preferred Skills:

- Experience with basic molecular biology techniques used for analysis of proteins and

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nucleic acids (e.g., gel electrophoresis, PCR, quantitative real-time PCR, use of thermocyclers and/or bioanalyzers, etc.)
- Computational skills (e.g., programming, R-based statistics)
- Coursework in biostatistics and/or bioinformatics
- Skills in oral and written communication
- Previous experience with aquatic organisms, particularly fish.
- Previous research experience, beyond lab-oriented coursework alone.
- Familiarity with literature search tools and strategies
- Cell culture experience (e.g., plating, maintaining, freezing animal cells using aseptic technique).
- Training or experience in organic chemistry, biochemistry, and analytical chemistry.

Point of Contact Rachel

Eligibility Requirements

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Bachelor's Degree or Master's Degree received within the last 60 months or currently pursuing.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (5 👁)
  - **Computer, Information, and Data Sciences** (1 👁)
  - **Engineering** (1 👁)
  - **Environmental and Marine Sciences** (11 👁)
  - **Life Health and Medical Sciences** (51 👁)
  - **Mathematics and Statistics** (4 👁)