Opportunity Title: EPA - Internship: Alternatives for Assessing Toxicity of Environmental Contaminants to Aquatic Organisms
Opportunity Reference Code: EPA-OCSPP-OPP-IO-2026-0006

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-OCSPP-OPP-IO-2026-0006

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.

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!

Application Deadline 8/28/2026 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), located in Duluth, Minnesota.

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 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 in 96-well plate format using robotic liquid handling and other automation. Testing of both individual chemicals in both cell-based and cell-free assays that screen chemicals for their ability to interact with specific molecular targets or pathways may also be employed. To aid in 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 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:

- You will learn a diversity of laboratory techniques which can be applied across life sciences research fields.
- You will learn to operate and use a range of scientific equipment. You will learn to handle aquatic organisms, cell culture, and/or biochemical assays.
- You will learn to search strategies and tools to efficiently and transparently document literature retrieval and evaluation.
- You will learn to evaluate data quality, troubleshoot research results, apply statistical methods for data analysis and interpretation.
- You will be integrated into a transdisciplinary research team and engaged in multiple aspects of project planning, communication and coordination, research implementation, and analysis.
- You will be afforded an opportunity to interact with internationally recognized leaders, both within and outside EPA. You will have the opportunity to contribute to original research and associated publications.

It is expected that this training opportunity will provide an early career scientist with knowledge, skills, and abilities needed to apply new technologies and associated data to regulatory

Opportunity Title: EPA - Internship: Alternatives for Assessing Toxicity of Environmental Contaminants to Aquatic Organisms
Opportunity Reference Code: EPA-OCSPP-OPP-IO-2026-0006

decision-making at the local, national, and/or international scale and to a professional career in life sciences research.

Mentor(s): The mentor for this opportunity is Deon Moore (moore.deon@epa.gov). If you have questions about the nature of the research, please contact the mentor.

Anticipated Appointment Start Date: September 1, 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. **The anticipated stipend range is $52,500 - $64,000 annually.**

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, 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. 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 be currently pursuing or have received a bachelor's or master's degree in the one of the relevant fields.

Preferred skills:

Opportunity Title: EPA - Internship: Alternatives for Assessing Toxicity of Environmental Contaminants to Aquatic Organisms
Opportunity Reference Code: EPA-OCSPP-OPP-IO-2026-0006

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

Stipend $52,500.00 – $64,000.00 Yearly

Point of Contact Rachel

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Bachelor's Degree or Master's Degree.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (6 👁)
  - **Computer, Information, and Data Sciences** (1 👁)
  - **Engineering** (1 👁)
  - **Environmental and Marine Sciences** (9 👁)
  - **Life Health and Medical Sciences** (51 👁)
  - **Mathematics and Statistics** (4 👁)