Opportunity Title: Research Opportunity in Ecotoxicology for Toxicity Testing Method Development with Mussels
Opportunity Reference Code: EPA-ORD-NHEERL-MED-2019-08

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-ORD-NHEERL-MED-2019-08

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 2/28/2020 3:00:00 PM Eastern Time Zone

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

Two research opportunities are available at the Environmental Protection Agency (EPA), Office of Research and Development (ORD), National Health and Environmental Effects Research Laboratory (NHEERL), Mid-Continent Ecology Division (MED) in Duluth, Minnesota.

Evaluating the toxicity of wastewaters (effluents) and ambient waters is one of the tools used by the Agency to ensure clean water. Methods developed for such assessments, such as Whole Effluent Toxicity (WET) tests, are routinely used, but understanding whether the current tests are adequate or sufficiently sensitive for maintaining clean water and protecting aquatic life under various environmental circumstances is of current interest. Research to develop new, sensitive methods to understand the toxicity of effluents and ambient waters is needed. Under the guidance of the mentor, the selected participants will focus on the development and assessment of biological test methods that can be used to quantify and document, how exposures to chemicals and mixtures occurring in ambient or waste water relate to ecotoxicological effects.

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

- Conducting aquatic toxicity tests method validation procedures to measure the response of aquatic organisms (e.g., invertebrates, i.e., mussels, mayflies, cladocerans, and other species) to effluents, ambient waters, and environmental contaminants of concern
- Compiling information from the literature and from on-line data sources relevant to assessing effects of chemicals, effluents, and ambient water samples for the method development
- Collecting and testing effluent, ambient samples, reference toxicants, and various chemicals with the toxicity test organisms
- Developing and applying appropriate QA/QC procedures associated with toxicological research and chemical analysis
- Conducting statistical analyses on experimental data
- Presenting research results at regional, national conferences and workshops
- Contributing to the preparation of peer-reviewed journal articles and disseminating research

Opportunity Title: Research Opportunity in Ecotoxicology for Toxicity Testing Method Development with Mussels
Opportunity Reference Code: EPA-ORD-NHEERL-MED-2019-08

results to project partners and stakeholders and EPA method manuals
- Developing careful and accurate records in a laboratory notebook, record results in summary spreadsheets, write-up brief summary reports of sample analyses with collaboration with the mentor, and participate in research group meetings

The research participant will learn a diversity of biological and chemical laboratory techniques that can be applied across life sciences research fields. The research participant will receive training on a variety of biological techniques, and learn to operate and use a range of scientific equipment during this project. The research participant will learn to evaluate data quality, troubleshoot research results, apply statistical methods for data analysis, and interpret ecotoxicological data, and prepare the data for presentations. The research participant will be part of a multi-disciplinary research team and be engaged in multiple aspects of project planning, communication and coordination, research implementation, and analysis. The research participant will have the opportunity to interact with internationally recognized scientific leaders, both within and outside EPA, in the area of aquatic toxicology and chemistry. It is expected that this training opportunity will provide an early career scientist with knowledge, skills, and abilities needed to develop and apply new technologies and associated data to regulatory decision-making at the local, national, and/or international scale to pursue a professional career in life sciences research and/or additional graduate education.

The mentor for this opportunity is Teresa Norberg-King (norberg-king.teresa@epa.gov).

Anticipated Appointment Start Date: February 2020

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 at EPA in the Duluth, Minnesota, 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. Degree must have been received within five years of the appointment start date.

Preferred skills:

- Previous research experience, beyond lab-oriented coursework alone
- Previous experience with aquatic organisms, including aquatic invertebrates and fish
- Experience or familiarity with chemistry procedures (e.g., alkalinity, hardness, ammonia)
- Skills relating to data collection, data analysis, and graphical presentation
- Skills in appropriate research data documentation and record-keeping
- Familiarity with routine quality assurance/quality control procedures for laboratory research

Eligibility Requirements

- **Degree:** Bachelor's Degree received within the last 60 month(s).
- **Discipline(s):**

Opportunity Title: Research Opportunity in Ecotoxicology for Toxicity Testing Method Development with Mussels
Opportunity Reference Code: EPA-ORD-NHEERL-MED-2019-08

- **Chemistry and Materials Sciences** (2 👁)
- **Environmental and Marine Sciences** (8 👁)
- **Life Health and Medical Sciences** (11 👁)

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