

Opportunity Title: Emerging Contaminant Research
Opportunity Reference Code: EPA-ORD-NHEERL-AED-2019-12

Organization U.S. Environmental Protection Agency (EPA)

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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 10/31/2019 3:00:00 PM Eastern Time Zone

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

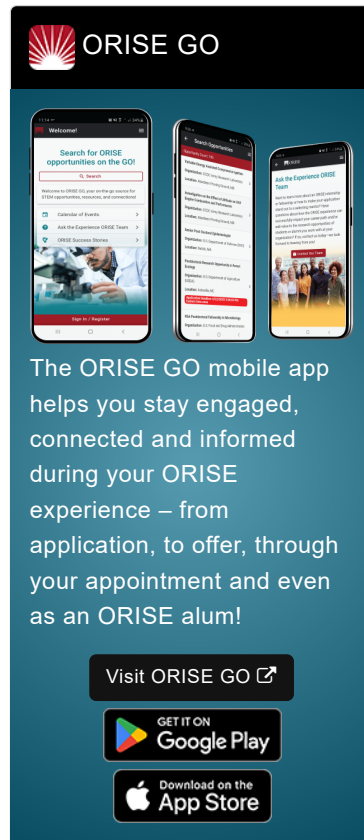
Emerging contaminants particularly microplastics, are an increasing concern in our Nation's marine waterways. Method development for detection of microplastics in environmental matrices and collection of basic information on fate and effects are critical to understanding and quantifying these emerging contaminants. In collaboration with a team of US EPA scientists, the research participant will help to develop methods for identification of microplastics using raman spectroscopy and quantify and identify microplastics from sediments around the United States. Future experiments may include those designed to understand the fate and effects of microplastics and other emerging contaminants. Our laboratory has several research efforts including method development for detecting and identifying microplastics in complex environmental matrices, development of methods to evaluate changes in marine benthos from a number of different stressors, and development of passive samplers for toxic and bioaccumulative contaminants.

The research participant will have the opportunity to be part of many aspects of ongoing research projects including microplastics and engineered nanomaterial research. In addition, the research participant will have an opportunity to learn the many aspects of laboratory organization and maintenance necessary to implement research projects. The research participant will benefit from participating as part of the research team, including attending and contributing to team meetings and discussions, and communicating their own research to the team. In addition, the research participant will learn the correct way to maintain and organize laboratory data and information, including physical samples, laboratory notebooks, and electronic files. The research participant will receive guidance in how to be compliant with all laboratory records management policies and requirements.

Beyond the specifics mentioned above, the research participant will develop skills in planning, conducting, and communicating scientific research in the context of a significant real-world environmental problem. The research participant will expand their knowledge concerning emerging contaminant pollution and related environmental issues in the coastal marine environments and



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learn about research careers in general and bench science methods development in particular. The research participant will have the opportunity to present research findings at major society conferences and to interact with a broad group of scientists at EPA and elsewhere. The research participant will have latitude in exercising independent initiative and judgment in the research commensurate with demonstrated level of training and experience.

The mentor for this opportunity is Kay Ho (ho.kay@epa.gov).

Anticipated Appointment Start Date: December 2, 2019

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 Narragansett, Rhode Island, 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 or master's degree in one of the relevant fields, or be currently pursuing one of the degrees and will reach completion by the appointment start date. Candidates currently pursuing a doctoral degree will also be considered. Degree must have been received within five years of the appointment start date.

Preferred skills:

- Research experience in chemical instrumentation, biology, chemistry and the environmental sciences
- Knowledge of general laboratory equipment including microscopy
- Research experience in identification of microplastics in environmental samples using spectroscopy
- Chemistry background
- Knowledge of any chemical instrumentation including raman or FTIR microscopy
- Strong desire to learn and the capability to conduct research independently as well as part of a group
- Field experience in sample collection
- Ability to swim and familiarity (or at least not fear) of small boats

Eligibility Requirements

- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree.
- **Discipline(s):**
 - **Chemistry and Materials Sciences** ([8](#))
 - **Earth and Geosciences** ([3](#))
 - **Engineering** ([3](#))
 - **Environmental and Marine Sciences** ([13](#))
 - **Life Health and Medical Sciences** ([19](#))

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◦ **Science & Engineering-related** (1 )

Affirmation I have received a bachelor's or master's degree within the past 5 years, OR am currently pursuing a bachelor's or master's degree and will reach completion by December 2, 2019. OR am currently pursuing a doctoral degree.

AND

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