

**Opportunity Title:** EPA Nano- and Microplastics Bioavailability Internship

**Opportunity Reference Code:** EPA-ORD-NHEERL-TAD-2020-03

**Organization** U.S. Environmental Protection Agency (EPA)

**Reference Code** EPA-ORD-NHEERL-TAD-2020-03

**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. Click [here](#) for detailed information about recommendations.

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

**Application Deadline** 7/9/2020 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.

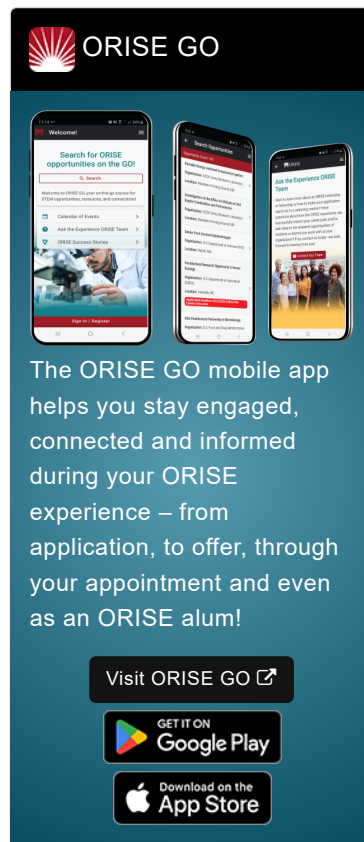
**EPA Office/Lab and Location:** A research opportunity is available at the Environmental Protection Agency (EPA), Office of Research and Development (ORD), Center for Public Health and Environmental Assessment (CPHEA), Public Health and Integrated Toxicology Division (PHITD), Neurological and Endocrine Toxicology Branch (NETB) in Research Triangle Park, North Carolina. This was formerly National Health and Environmental Effects Research Laboratory (NHEERL), Toxicology Assessment Division (TAD).

**Research Project:** This research project involves assessment of the potential for biological uptake of small plastic particles now being found increasingly in environmental air and water samples that result from the environmental degradation of plastic trash. What is the role of particle size, shape and composition on the ability of these particles to enter cells in the human lung or gastrointestinal (GI) tract?

The research participant will be part of a team-oriented research project in which tissue culture models of lung and GI tissues are exposed to small plastic particles in order to determine the extent of cellular uptake. The results will provide guidance to other programs relating to the collection of environmental samples and their assessment for potential nano and microplastic contamination.


**Learning Objectives:**


- Learning sterile laboratory techniques
- Learning to grow human-derived 3D tissue cultures
- Learning to handle and evaluate particles on the micron and nanometer size range
- Learning to expose tissue cultures to different concentrations of plastic particles
- Learning to assess cellular uptake with tools such as microscopy and flow cytometry data analysis




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- Record keeping and quality control procedures
- Laboratory health and safety practices
- Scientific writing and editing

**Mentor(s):** The mentor for this opportunity is Will Boyes ([boyes.william@epa.gov](mailto:boyes.william@epa.gov)) and the co-mentor is Mike Hughes ([hughes.michaelf@epa.gov](mailto:hughes.michaelf@epa.gov)). If you have questions about the nature of the research please contact the mentor(s).

**Anticipated Appointment Start Date:** Summer 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 three 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@ornl.gov](mailto:EPArpp@ornl.gov) and include the reference code for this opportunity.

**Qualifications** The qualified candidate should have received a bachelor's degree in one of the relevant fields, or be currently pursuing the degree and will reach completion by August 2020. Degree must have been received within five years of the appointment start date.

Preferred skills:



- Laboratory experience with sterile techniques, tissue culture, microscopy, histology and similar laboratory procedures
- Basic laboratory skills such as mixing solutions, use of common instruments (e.g., laboratory scales, pH meters, hoods, etc.), record keeping, data analysis, etc.

**Eligibility Requirements**

- **Citizenship:** U.S. Citizen Only
- **Degree:** Bachelor's Degree received within the last 60 months or anticipated to be received by 8/31/2020 11:59:00 PM.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** ([3](#) )
  - **Communications and Graphics Design** ([1](#) )
  - **Environmental and Marine Sciences** ([2](#) )
  - **Life Health and Medical Sciences** ([12](#) )

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- **Mathematics and Statistics** ([1](#) )
- **Physics** ([1](#) )
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).