Opportunity Title: EPA Toxicity Assessment of Wildland Fire Air Pollution Internship
Opportunity Reference Code: EPA-ORD-CPHEA-PHITD-2020-03

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. Click here for detailed information about recommendations.

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

Application Deadline 9/30/2020 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 Environmental Assessment (CPHEA), Public Health and Integrated Toxicology Division (PHITD) located in Research Triangle Park, North Carolina. PHITD research focuses on the characterization and biological mechanisms of adverse health effects of environmental pollutants.

Research Project: This research project addresses the growing need to assess the relative toxicity of regional wildland fire-related particulate matter air pollution. The aims of the project are to: 1) assess the ecotoxicology, cardiotoxicity, and irritant potential of wildland fire PMs from various regional burns in zebrafish, 2) assess the respiratory toxicity of the same wildland fire PMs in human respiratory epithelial cells, and 3) elucidate key PM chemical characteristics and biological mechanisms that drive adverse responses.

Learning Objectives:

- think critically regarding environmental air pollution and health concerns and design and conduct hypothesis-driven research that addresses these issues
- use state-of-the-art equipment to perform toxicity assessments in zebrafish, including use of video imaging techniques to measure locomotor responses, heart rate, and malformations
- use in vitro assays to assess responses in human respiratory epithelial cells
- use mechanistic studies to examine specific modes of action
- learn to prepare and submit manuscripts for publication in peer-reviewed journals

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- learn to give platform presentations and if possible, present at local/national scientific meetings

Mentor(s): The mentor for this opportunity is Aimen Farraj (farraj.aimen@epa.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: September 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@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, or be currently pursuing a master's degree. Degree must have been received within five years of the appointment start date.

Preferred skills:

- Ability to work in a physiology/biology/toxicology laboratory setting
- Background in analysis software, and an interest in biological, physiological and/or toxicology research
- Database management experience, including evidence of experience with spreadsheet preparation, data collection, and database organization
- Familiarity with basic laboratory health and safety procedures
- Prior experience in working in a laboratory setting
- Previous experience working with zebrafish and/or in vitro epithelial assays

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Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Bachelor's Degree or Master's Degree.
- **Discipline(s):**
  - **Environmental and Marine Sciences** (3 👁)
  - **Life Health and Medical Sciences** (8 👁)
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).

Affirmation I have received a bachelor's or master's degree within the past 5 years, or am currently pursuing a master's degree.