

Opportunity Title: EPA Pollutant Effects on Brain Development Internship

Opportunity Reference Code: EPA-ORD-CPHEA-PHITD-2021-04

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-ORD-CPHEA-PHITD-2021-04

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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.

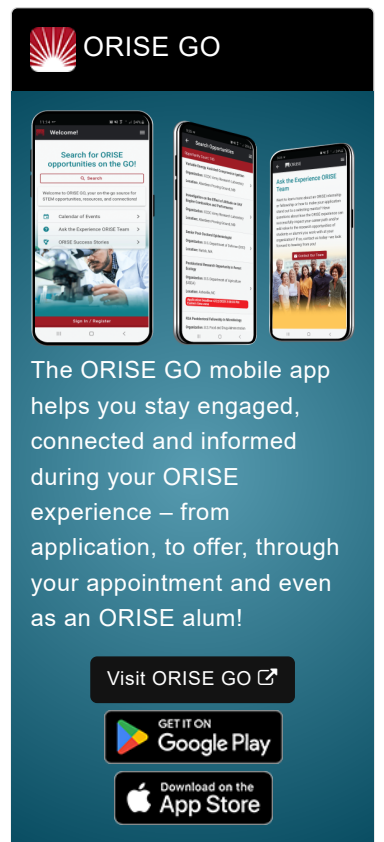
Application Deadline 8/4/2021 3:00:00 PM Eastern Time Zone

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.


Research Project: Perfluoroalkyl substances (PFAS) are persistent organic pollutants found in the blood of humans and animals around the world; however, the health effects of these chemicals are not well understood. The goal of this research project is to understand how PFAS affect pregnancy and could potentially induce neurotoxicity following a maternal exposure. In this project rats will be used as the model system to mimic human pregnancy and brain development, but in silico and in vitro methods will be incorporated as the project progresses. With guidance from the mentors, the research participant may be involved in the following training activities:


- Animal study organization
- Handling and treating rats, including in vivo dosing via oral, ip, sc routes
- Necropsy and preparation of tissues for further experiments
- Mass-spectrometry to measure PFAS in biofluids/tissues
- Histology, tissue sectioning
- Immunohistochemistry and light/fluorescent microscopy
- Potential to learn RNA-Sequencing data analysis
- Record keeping, data processing and basic statistical analyses
- Reading and interpreting peer-reviewed scientific literature




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Learning Objectives: The research participant will learn about problem solving and how to answer scientific research questions. At the laboratory bench, the research participant will gain experience in various experimental approaches and techniques in neurotoxicology research. The research participant will be mentored by an EPA investigator, and will have some latitude in exercising independent initiative and judgment, commensurate with the level of experience and competence after training. The research participant may also have opportunities to attend seminars and lectures held at local sites.

Mentor(s): The mentors for this opportunity are Katie O'Shaughnessy (oshaughnessy.katie@epa.gov) and Mary Gilbert (gilbert.mary@epa.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: **Summer 2021.** 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 or 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. 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 ORISE.EPA.ORD@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 with completion by June 2021. Degree must have been received within the past five years.

Preferred skills (if you have any such experience, please describe in your application):

- Ability to handle small animals like rodents

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- Highly motivated, excited about science, with great organization skills and the ability to multitask
- Some wet lab experience including knowledge of histology, pipetting, etc.
- Summarizing experimental data, analyzing research results, and preparing data for scientific presentations
- Critical thinking skills

**Eligibility
Requirements**

- **Citizenship:** U.S. Citizen Only
- **Degree:** Bachelor's Degree received within the last 60 months or anticipated to be received by 6/30/2021 11:59:00 PM.
- **Discipline(s):**
 - **Chemistry and Materials Sciences** ([12](#))
 - **Communications and Graphics Design** ([2](#))
 - **Computer, Information, and Data Sciences** ([17](#))
 - **Earth and Geosciences** ([21](#))
 - **Engineering** ([27](#))
 - **Environmental and Marine Sciences** ([14](#))
 - **Life Health and Medical Sciences** ([46](#))
 - **Mathematics and Statistics** ([10](#))
 - **Physics** ([16](#))
 - **Science & Engineering-related** ([1](#))
 - **Social and Behavioral Sciences** ([28](#))
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).