Opportunity Title: EPA Biologist Research Opportunity for Immunotoxicology Assay Development and Application to PFAS Chemical Testing
Opportunity Reference Code: EPA-ORD-CCTE-BCTD-2023-11

Organization U.S. Environmental Protection Agency (EPA)

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How to Apply ***Connect with ORISE...on the GO!*** Download the new ORISE GO mobile app in the Apple App Store or Google Play Store to help you stay engaged, connected, and informed during your ORISE experience and beyond!

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 6/23/2023 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 Computational Toxicology and Exposure (CCTE), Biomolecular & Computational Toxicology Division (BCTD) located in Durham, North Carolina.

Research Project: The Center for Computational Toxicology and Exposure (CCTE) within the US EPA's Office of Research and Development is heavily invested in developing New Approach Methods (NAMs) to better define the potential hazards of thousands of environmental chemicals with unknown impacts on human health. This research project is part of a new research program in the Rapid Assay Development Branch that seeks to develop and optimize a suite of assays that will be used to assess the immunotoxicity hazard potential of a given chemical or mixture of chemicals, with an initial focus on perfluorinated substances (PFAS). These new assays will include both in vitro cell-based assays employing human primary or immortalized cell lines, as well as in vivo assays utilizing the zebrafish model vertebrate species. The incorporation of immunotoxicity hazard assessment will augment the CCTE tiered strategy for the development and application of NAMs for environmental chemical screening.

The research participant will collaborate with team members in a collaborative approach involving multiple investigators that span the disciplines of immunology, molecular and cellular biology, high-throughput toxicology, and bioinformatics. This research project will utilize next-

generation approaches for assay development, including high-content imaging and complex co-culture cell models. The research participant develop methods, execute lab-based experiments, and generate, analyze and report data.

The research participant will collaborate with a multidisciplinary team to:

- Develop methods in zebrafish and cell-based assays for assessing immunotoxicity hazard
- Generate, analyze, and integrate data from these and other assays
- Synthesize results for publication and presentation

Learning Objectives: General participatory activities and opportunities for gained experience will include:

- Reading and interpreting relevant scientific literature
- Hands-on participation in experimental research and data interpretation
- Active participation in meetings of the project team, branch, and division
- Preparing reports, presentations, and summaries of the data
- Opportunity to present research at professional meetings
- Authoring manuscripts for publication in peer-reviewed journals

Mentor(s): The mentor for this opportunity is Kimberly Slentz-Kesler (slentzkesler.kimberly@epa.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: May 1, 2023. 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 five 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.

ORISE offers all ORISE EPA graduate students and Postdocs a free 5-year

membership to the National Postdoctoral Association (NPA).

The successful applicant(s) will be required to comply with Environmental, Safety and Health (ES&H) requirements of the hosting facility, including but not limited to, COVID-19 requirements (e.g., facial covering, physical distancing, testing, vaccination).

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@orau.org and include the reference code for this opportunity.

Qualifications

The qualified candidate should have received a bachelor's degree in one of the relevant disciplines (e.g. Biology, Biochemistry, Toxicology, Environmental Science, Cell / Molecular Biology), or be currently pursuing a master's or doctoral degree. Most recent degree must have been received within the past five years.

Preferred Skills:

- Course work in cell biology, molecular biology, or biochemistry
- Additional course work in immunology, pharmacology, toxicology, environmental science, statistics, or related fields is helpful.
- Experience with Zebrafish model species, especially for immunology or developmental toxicology, and experience with basic tissue culture methods and aseptic technique.
- Experience with the open source R statistical computing environment is also helpful.
- Highly self-motivated individual with excellent writing and oral communication skills.

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 60 months or currently pursuing.
- **Discipline(s):**
  - **Engineering** (1 👁)
  - **Environmental and Marine Sciences** (5 👁)
  - **Life Health and Medical Sciences** (48 👁)