Opportunity Title: EPA Biologist for Developmental Neurotoxicity Assessment in Larval Zebrafish Fellowship
Opportunity Reference Code: EPA-ORD-CCTE-BCTD-2023-19

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-ORD-CCTE-BCTD-2023-19

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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 10/27/2023 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 with the Computational Toxicology and Bioinformatics Branch 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.

CCTE is responsible for developing new computational tools and providing quantitative analysis for improving environmental risk assessments and regulatory decisions pertaining to chemical safety and sustainability.

Research Project: This research project will develop methods and test a chemical library for developmental neurotoxicity potential using a larval zebrafish model.

EPA provides research to develop new tools and methods to facilitate the efficient testing of chemicals for important adverse effects including developmental neurotoxicity. There are tens of thousands of chemicals that are currently in commerce, with hundreds more introduced every year. Many of these chemicals find their way into the environment and only a small fraction have been adequately assessed for potential risk. ISTD uses alternative approaches including in vitro assays and small organisms like zebrafish to screen chemicals for the potential to cause developmental neurotoxicity. The focus is on developing medium and high-throughput assays that can be used to rapidly detect chemicals that can alter the key events of neurodevelopment.

The objective of the research project is to test a chemical library in a developing zebrafish model to determine the potential for the chemicals to

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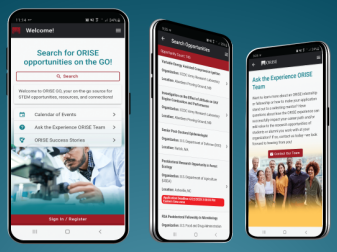

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produce perturbations in the normal development of the nervous system. The research participant may also be involved in developing new behavioral assays for developmental neurotoxicity testing in zebrafish. The research participant will collect, summarize and analyze the data for publication. Ultimately these data will be combined with in vitro data on the same chemicals to develop models and adverse outcome pathways for developmental neurotoxicity.

Research activities may include:

- Hands-on participation in experimental research and data interpretation
- Reading and interpreting relevant scientific literature
- 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.

Learning Objectives: The research participant will learn about zebrafish development, developmental biology, nervous system development and biology, zebrafish husbandry and behavior, chemical screening, toxicology; data handling and statistical analyses, and how to participate in a multifaceted research team.

Mentor(s): The mentor for this opportunity is Stephanie Padilla (padilla.stephanie@epa.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: September 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).

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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 an associates degree or bachelor's degree in one of the relevant disciplines (e.g., Biology, Psychology, Biochemistry, Toxicology, Environmental Science, or related discipline). Degree must have been received within the past five years.

Preferred Skills:

- Highly self-motivated individual with excellent writing and oral communication skills.
- Experience working with small fish models is desirable, but not essential.
- Experience with the open source R statistical computing
- Basic knowledge of biology, chemistry, biochemistry, developmental biology or related field

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Associate's Degree or Bachelor's Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (2)
  - **Engineering** (27)
  - **Environmental and Marine Sciences** (14)
  - **Life Health and Medical Sciences** (48)
  - **Social and Behavioral Sciences** (2)