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Opportunity Title: EPA Fellowship on Training in Metabolic Retrofit of High-throughput Toxicity Assays
Opportunity Reference Code: EPA-ORD-CCTE-BCTD-2023-12

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-ORD-CCTE-BCTD-2023-12

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 7/7/2023 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: This research project will use a recently-established technique to retrofit high-throughput toxicity (HTT) assays with xenobiotic metabolism (XM). Initially, this project will focus on cell viability, cellular stress and endocrine HTT endpoints. The goal is to identify chemical metabolites with bio-activity profiles that differ from their respective parent compounds so that in vitro hazard characterization for these chemicals more accurately predict in vivo adverse outcomes.

The research participant will collaborate in optimizing methods, maintaining/dosing of cell cultures, and generating/analyzing HTT data.

Learning Objectives: The research participant will learn how to:

- Maintain and expose cell cultures to control and test chemicals
- Transfect various human cell types with XM enzyme-encoding messenger RNAs
- Conduct multiple HTT assays for cell viability, cellular stress and endocrine HTT endpoints
- Analyze HTT data and synthesize results for publication and presentation

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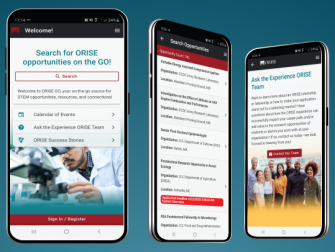

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- Utilize state-of-the-art laboratory automation that supports high-throughput screening

Other 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 meetings
- Preparing reports, presentations, and summaries of the data
- Presenting at professional meetings
- Authoring manuscripts for publication in peer-reviewed journals.

Mentor(s): The mentor for this opportunity is Steve Simmons (simmons.steve@epa.gov). If you have questions about the nature of the research, please contact the mentor(s).

Anticipated Appointment Start Date: April 3, 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

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

Qualifications

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

Preferred Skills:

- Lab course or work experience with general laboratory techniques associated with aseptic technique (cell culture)
- Experience with automated liquid handling platforms such as acoustic dispensing and/or solenoid micro-dispensers
- Experience with basic statistical methods and software (e.g. GraphPad) or object-oriented programming (R, Python)
- Proficiency with Microsoft Office applications (i.e., Excel, PowerPoint, Word, Outlook).
- Strong written, oral, and electronic communication skills

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Bachelor's Degree received within the last 60 months or currently pursuing.
- **Discipline(s):**
  - **Environmental and Marine Sciences** (14 👁)
  - **Life Health and Medical Sciences** (48 👁)
  - **Mathematics and Statistics** (11 👁)