

Opportunity Title: EPA Toxicity Outcomes and Risk Assessment Fellowship

Opportunity Reference Code: EPA-ORD-CCTE-CCED-2020-04

Organization U.S. Environmental Protection Agency (EPA)

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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 8/24/2020 3:00:00 PM Eastern Time Zone

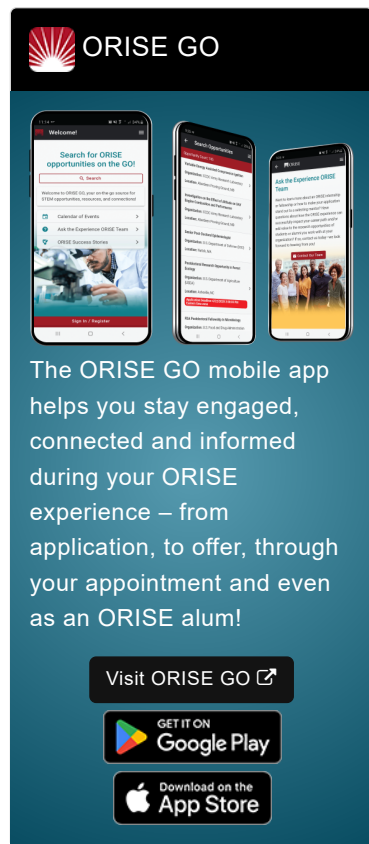
Description ***Applications may be reviewed on a rolling-basis and this posting could close before the deadline.** Click [here](#) for information about the selection process.

EPA Office/Lab and Location: A research opportunity is available at the Environmental Protection Agency (EPA), Office of Research and Development (ORD), Center for Computational Toxicology and Exposure (CCTE), Chemical Characterization & Exposure Division (CCED) located in Research Triangle Park, North Carolina.

The EPA Center for Computational Toxicology & Exposure (CCTE) provides scientific leadership for New Approach Methodologies (NAMs) and innovative in vivo models to evaluate human health and ecological hazards as well as computational and advanced analytical chemistry approaches for characterizing exposure. The Center's research integrates advances in biology, biotechnology, chemistry, statistics, and computer modeling to advance chemical safety.

Research Project: This research project aims to exploit cheminformatics approaches to assess the ToxCast/Tox21 chemical library coverage of putative reactivity and toxicity mechanistic space as captured by Adverse Outcome Pathways (AOPs), (Quantitative) Structure Activity Relationships ((Q)SARs) for toxicity and biotransformation such as available within commercially and publicly available expert systems and knowledge-bases. The insights will be used to augment development of objective read-across approaches to predict toxicity outcomes that can be applied for risk assessment purposes.

The research participant will be a part of a multidisciplinary research team including scientists at EPA and other partners. The research activities may



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include: (1) generating and evaluating QSAR/structural alert predictions for chemical inventories; (2) developing mechanistically informed chemical groupings to facilitate read-across; (3) development of prototype tools for data visualization and predictive models and (4) assisting CCTE researchers and collaborators in the application of read-across models to diverse research projects. The research participant may contribute to the development of a new read-across predictive models and prototype tools for read-across.

Learning Objectives: In the course of this project, research findings will be disseminated and communicated through web-based dashboards, work-in-progress seminars, peer-reviewed publications, and national meetings of professional societies. The research participant will be involved in highly visible predictive toxicology efforts as part of the computational toxicology research projects and will be engaged with researchers world-wide. The research participant may be published in peer-reviewed journals and present research results at local and national meetings.

The research participant will gain education in the general areas of computational toxicology, data analysis and data management in preparation for future graduate studies.

Mentor(s): The mentor for this opportunity is Grace Patlewicz (patlewicz.grace@epa.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: Fall 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 three to 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.

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

Qualifications The qualified candidate should have received a master's or doctoral degree in one of the relevant fields, or be currently pursuing the degree and will reach completion by September 2020. Degree must have been received within five years of the appointment start date.

Preferred skills:

- Generally knowledgeable in at least one of the following fields: chemistry, applied mathematics, computer science, or biomedical engineering
- Experience in interpreting scientific data
- Skill and experience in oral and written communication
- Proficiency in the Python or R programming language for scientific computing, including: development, revision, and release of packages for public use
- Familiarity in developing graphical user interfaces using JavaScript frameworks and using RESTful web-services

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Master's Degree or Doctoral Degree received within the last 60 months or anticipated to be received by 9/30/2020 11:59:00 PM.
- **Discipline(s):**
 - **Chemistry and Materials Sciences** ([12](#) 👁)
 - **Computer, Information, and Data Sciences** ([7](#) 👁)
 - **Environmental and Marine Sciences** ([3](#) 👁)
 - **Life Health and Medical Sciences** ([45](#) 👁)
 - **Mathematics and Statistics** ([10](#) 👁)
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).