Opportunity Title: EPA Computational Biology Fellowship
Opportunity Reference Code: EPA-ORD-CCTE-BCTD-2020-02

Organization	U.S. Environmental Protection Agency (EPA)
Reference Code	EPA-ORD-CCTE-BCTD-2020-02
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.

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Application Deadline	9/23/2020 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), Biomolecular & Computational Toxicology Division (BCTD) located in Research Triangle Park, North Carolina.

The EPA 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 aims to develop computational models to predict the safety of chemicals using data from alternative animal species. The tools to be used include databases of chemicals of environmental interest, previously run animal studies, and outputs of various predictive models of chemical action. The project integrates data science, software engineering, applied statistics, and predictive mathematical modeling.

Under the guidance of a mentor, the research participant will develop novel computational methods for analyzing toxicological endpoints from zebrafish testing. Research activities may include: (1) developing methods to curate data used to build models; (2) evaluating existing models and integration of these into in-house modeling pipelines; (3) developing consensus models (i.e. models that rely on multiple other models as input).
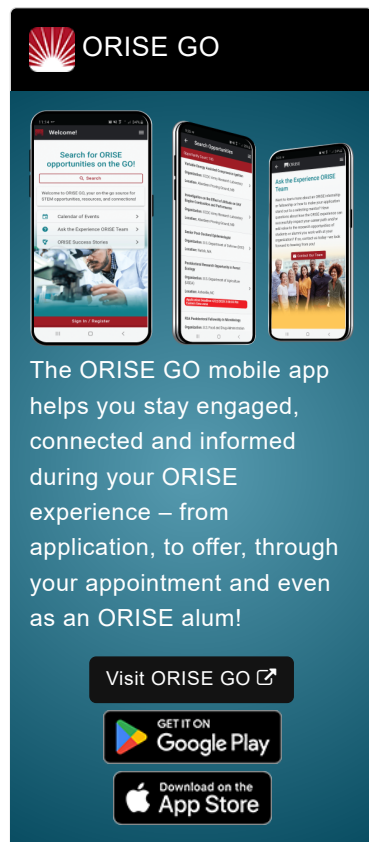
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Learning Objectives: The research participant will be a member of an dynamic, multifaceted research team, gain education and training in the general areas of computational chemistry, bioinformatics data science, mathematical modeling, data management, and computational toxicology in preparation for future career opportunities.

The research participant may author or co-author on peer-reviewed publications and will present at local and national meetings. The participant will be a member of a multi-disciplinary research team.

Mentor(s): The mentors for this opportunity are Stephanie Padilla (padilla.stephanie@epa.gov), Katie Paul-Friedman (paul-friedman.katie@epa.gov), and Richard Judson (Judson.richard@epa.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: Summer/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 up 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.

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 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:

- Software development experience in R and/or Python

- Strong written, oral and electronic communication skills
- Experience in one or more of the following: biostatistics, Bayesian modeling, data mining approaches, supervised and unsupervised machine learning approaches, applied mathematics
- Experience with high-dimension datasets, as well as in vivo datasets

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** 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** (4 👁)
  - **Computer, Information, and Data Sciences** (3 👁)
  - **Engineering** (1 👁)
  - **Environmental and Marine Sciences** (3 👁)
  - **Life Health and Medical Sciences** (45 👁)
  - **Mathematics and Statistics** (3 👁)
  - **Other Non-Science & Engineering** (1 👁)
  - **Physics** (1 👁)
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).