zintellect
climb higher

Opportunity Title: EPA Fellowship on Modeling Impacts of Pesticides and other Chemical Stressors on Native Pollinators
Opportunity Reference Code: EPA-ORD-CPHEA-PHESD-2023-11

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-ORD-CPHEA-PHESD-2023-11

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 12/22/2023 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 Public Health Environmental Assessment (CPHEA), Public Health and Environmental Systems Division (PHESD) in Research Triangle Park, North Carolina.

Research Project: The US EPA Office of Research and Development is developing methods and generating supporting data to assess pesticide impacts on native pollinators (e.g., non-Apis bees, wasps). The goal of this effort is to broaden the Agency's pesticide risk assessment capability beyond honey bees to other beneficial pollinators.

The research participant may have the opportunity to develop, apply, evaluate and improve life history models and chemical exposure/effects models for native pollinators. Model structures and components may include agent-based models, spatially explicit foraging models and toxicokinetic models. The research participant may also collate and manage relevant data sources to inform these models. Additionally, the research participant may have the opportunity to analyze observational data on pollinator communities, potential habitat, and pesticide applications using statistical modeling. Data from non-targeted analysis of pollinator-relevant environmental matrices may be analyzed to explore new and emerging compounds of concern. Activities may include: computer programming R and/or Python), data collation, statistical analysis (e.g., generalized linear regression), spatial modeling and geographic information systems(GIS), sensitivity analysis, model selection, numerical verification of

model output, and meta-analysis.

Learning Objectives: The research participant will have the opportunity to analyze data, present research results, and prepare manuscripts for publication. The research participant will have the opportunity to develop skills for robust and reproducible science, including code version control systems (e.g. git) and computational notebooks (e.g. R Markdown, Jupyter notebooks). As a result, the participant will have the opportunity to further develop statistical inference, coding and scientific writing skills.

Mentor(s): The mentor for this opportunity is Jeffrey Minucci (minucci.jeffrey@epa.gov) . If you have questions about the nature of the research, please contact the mentor.

Anticipated Appointment Start Date: October 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 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. A travel/training allowance will be provided to the candidate to present project-related research data and results at scientific meetings (e.g., conferences and workshops). 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 master's degree in one of the relevant fields or be currently pursuing the degree with completion by the appointment start date. The degree must have been received within the past five years of the anticipated appointment start date.

Preferred skills:

- Experience with R, Python or SAS.
- Experience analyzing data with statistical models.
- Familiarity with process-based models (e.g., agent-based models, exposure models).
- Ability to develop and test hypotheses.
- Strong written and oral communication skills including including conference presentations and/or effort toward first author or co-authored publications.
- Ability to work and collaborate in a multidisciplinary environment.

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Master's Degree received within the last 60 months or anticipated to be received by 10/1/2023 11:59:00 PM.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **Computer, Information, and Data Sciences** (4 👁)
  - **Earth and Geosciences** (5 👁)
  - **Engineering** (6 👁)
  - **Environmental and Marine Sciences** (7 👁)
  - **Life Health and Medical Sciences** (48 👁)
  - **Mathematics and Statistics** (11 👁)
  - **Other Non-Science & Engineering** (1 👁)
  - **Physics** (2 👁)
  - **Social and Behavioral Sciences** (2 👁)