Opportunity Title: EPA Postdoctoral Fellowship on Evaluating Health Impacts of Underground Storage Tank Emissions Using Electronic Health Records
Opportunity Reference Code: EPA-ORD-CPHEA-PHITD-2022-11

Organization U.S. Environmental Protection Agency (EPA)

Reference Code EPA-ORD-CPHEA-PHITD-2022-11

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 8/4/2023 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 Integrated Toxicology Division (PHITD) located in Chapel Hill, North Carolina.

Research Project: This research project will study the impacts of underground storage tanks (USTs) on health outcomes using large electronic health record databases specifically developed for use in environmental health studies. The research participant will collaborate with a multi-disciplinary team to of scientists to understand and possibly mitigate health effects associated with USTs. There will be opportunities to interface researchers using case studies, exposure assessment, community interventions, in vivo toxicology, and molecular epidemiology to gain a more complete understanding of this multifaceted environmental health problem. The research project will begin with developing and integrating exposure maps of USTs into existing electronic health record databases as well as other potential large databases, e.g. Medicare beneficiaries, and then move quickly into evaluating health effects associated with USTs to guide efforts to further evaluate these effects using toxicological studies and community health surveys and ultimately culminating

in evaluations of the effectiveness of mitigation efforts.

Learning Objectives: As a result of this training, the research participant will improve their skills in epidemiology, analysis of electronic health records, GIS / mapping, and environmental health.

Mentor(s): The mentor for this opportunity is Dr. Cavin Ward-Caviness (ward-caviness.cavin@epa.gov). If you have any questions about the research, please contact the mentor.

Anticipated Appointment Start Date: Summer/Fall 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. 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.

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Qualifications

The qualified candidate should have received a doctoral degree in one of the relevant fields, or be currently pursuing the degree with completion before the appointment start date. Degree must have been received within the past five years.

Preferred skills/experience:

- The ideal candidate will have a strong background in epidemiology, statistics or a related field, and experience in analyzing environmental risks associated with health outcomes using data from cohort studies.
- Some experience with data extraction and data manipulation, preferably using SQL.
- Candidates with GIS skills and experience in exposure assessment will be highly valued.
- Experience creating and executing study designs for epidemiology studies, including mixed effects models and survivalmodels
- Expertise in R including usage of R for creating maps and GIS analytics
- Experience cleaning and manipulating large health datasets
- Experience in selecting appropriate statistical models for a task and interpreting the results of such models
- Familiarity with high-dimensional analyses, penalized regression, and dimension reduction techniques
- Excellent writing and presentation skills
- Self-motivated & independent

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree received within the last 60 months or currently pursuing.
- **Discipline(s):**
  - **Earth and Geosciences** (1 👁)
  - **Environmental and Marine Sciences** (2 👁)
  - **Life Health and Medical Sciences** (6 👁)
  - **Mathematics and Statistics** (2 👁)