

Opportunity Title: EPA Fellowship for Evaluating Associations Between Different Air Pollution Exposure Metrics and Health Outcomes

Opportunity Reference Code: EPA-ORD-CPHEA-PHESD-2022-05

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 1/12/2023 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), Epidemiology Branch located in Research Triangle Park, North Carolina

Research Project: This pre-doctoral research opportunity aims to connect environmental exposures to human health, with a focus on air pollution, and factors that contribute to or modify air pollution exposures, with the goal of better informing decision makers for policy and public health practice. The research participant may use birth records, electronic health records, or existing cohort studies to investigate associations between air pollutants (e.g., particulate matter mass and components, ozone, and nitrogen dioxide) and health outcomes (e.g., birth weight, preterm birth, birth defects, infant mortality, respiratory outcomes), modifiers of those associations, and associations specifically in vulnerable or susceptible populations.

The research participant will have the opportunity to collaborate with the EPA Principle Investigator and a team of colleagues on projects focusing on air pollution and health outcome associations, and projects examining novel methods for assigning exposure and controlling for potential co-pollutant confounding. The research participant may explore linkages between a variety of human health outcomes and air pollution exposures, including developing relevant study designs, choosing outcomes of interest, and identifying data with which their studies can be carried out. Potential



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research activities may include the following:

1. Participating in systematic reviews and conducting meta-analyses;
2. Developing criteria for and conducting risk of bias analyses,
3. Conducting data analysis, documenting statistical code and interpretation of results;
4. Conducting and documenting quality assurance and review of data analysis and databases;
5. Participating in report preparation, presentation and summaries of the data;
6. Presenting at professional meetings; and
7. Collaborating in authoring manuscripts or reports.

Learning Objectives: Potential research projects will allow the research participant to gain experience with and learn

1. Best practices for systematic reviews and risk of bias analyses;
2. Hands-on experience with complex and interacting environmental exposures;
3. Skills in data management and manipulation with moderate to large databases;
4. Use of air modeling output data in health outcomes research;
5. Strategies for presenting scientific research in different formats; and
6. Approaches for developing their own study ideas and plans within the environmental epidemiology framework.

Mentor(s): The mentor(s) for this opportunity is Tom Luben (luben.tom@epa.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: **November 1, 2022.** 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 part-time (10-20 hours per week).

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

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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 be currently pursuing a doctoral degree in one of the relevant fields (e.g. Epidemiology, Biostatistics, Environmental Health, Computational Biology, Environmental Science, Public Health). Degree must have been received within five years of the anticipated appointment start date.

Preferred skills:

- The student should have previously achieved a master's degree
- Knowledge of epidemiologic analysis techniques (e.g., regression, causal inference methods), statistical packages (e.g., SAS, R, Python) and environmental exposures

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
 - **Degree:** Currently pursuing a Doctoral Degree.
 - **Discipline(s):**
 - **Earth and Geosciences** ([1](#) )
 - **Environmental and Marine Sciences** ([1](#) )
 - **Life Health and Medical Sciences** ([48](#) )