

Opportunity Title: EPA Health Effects of Air Pollutants Fellowship
Opportunity Reference Code: EPA-ORD-CPHEA-PHITD-CIB-2020-09-A

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.

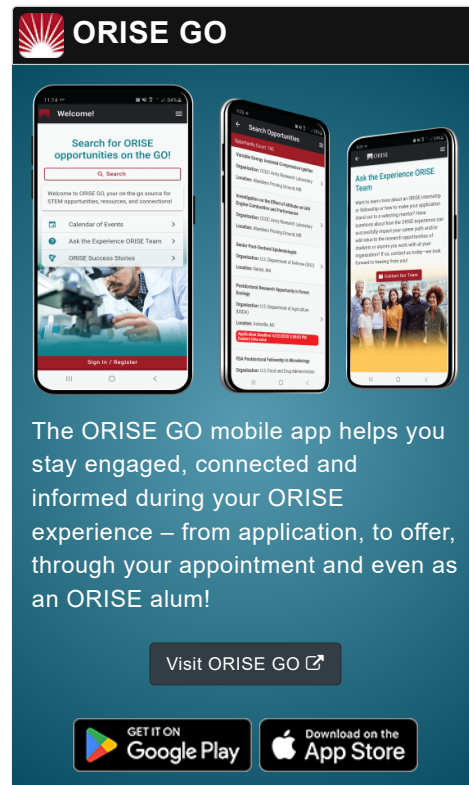
Application Deadline 5/31/2021 3:00:00 PM Eastern Time Zone

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 postdoctoral research opportunity is available at the U.S. Environmental Protection Agency (EPA), Center for Public Health and Environmental Assessment (CPHEA) in the Office of Research and Development (ORD), Public Health and Integrated Toxicology Division (PHITD), located in Research Triangle Park, North Carolina.

Research Project: Hazardous air pollutants contribute to adverse health outcomes. Our recent studies point to a central role of neuroendocrine system in mediating effects of irritant environmental pollutants. However the mechanisms and interactive influence of host factors, such as diseases, psychosocial stressors and nutritional disparities, in mediating health effects are poorly understood. Our primary hypothesis is that neuroendocrine system plays a critical role in mediating pulmonary, systemic and extrapulmonary effects of inhaled irritant pollutants.

The research participant will have the opportunity to be trained in performing research on identifying mechanisms of interactive effects of chemical (air pollutants) and non-chemical stressors on health using susceptible models. The health effects of hazardous air pollutants and wild-fire smoke exposures will be assessed in



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healthy and susceptible models. The mechanisms of neuroendocrine, central and peripheral effects will be examined in using novel molecular biology techniques. Under guidance from a mentor, the research participant will also have the opportunity to receive training in state-of-the-art inhalational exposures, and high throughput technologies. The research participant will have the opportunity to collaborate with scientists at the EPA and NIEHS. The research project will be closely integrated with ongoing projects in different branches of PHITD through collaboration.

The research activities and learning objectives may include:

1. Developing experimental protocols and problem-solving.
2. Assessment of tissue-specific changes using conventional molecular technologies and use high throughput platforms.
3. Use of molecular biology techniques to assess protein and gene expression changes in tissue samples, isolate cells and participate in high throughput genomics application. The participant will have the opportunity to collaborate with other scientists to process and analyze the results.
4. Development of adverse outcome pathways through assessing the impact of methodologically challenging hazardous air pollutants.
5. Developing updated reports (oral, written) to inform mentors and collaborators about activities and results concerning research progress (e.g., presentations, posters, and manuscripts).
6. Presentation of scientific findings by presenting results at scientific meetings.
7. Organizing and prioritizing research activities and maintain quality assurance of own and team data and information, including physical samples, laboratory notebooks, and electronic files. This includes compliance with all laboratory Quality Assurance and management policies and requirements.

Learning Objectives: The ORISE participant will have the opportunity to develop skills in designing, conducting, analyzing, and synthesizing research for communication to the broader scientific audience. The research participant will have opportunities to present research findings at major society conferences and interact with a broad group of scientists at the EPA and elsewhere.

Mentor(s): The mentors for this opportunity are Dr. Urmila Kodavanti (kodavanti.urmila@epa.gov) and Dr. Ian Gilmour (gilmour.ian@epa.gov). If you have questions about the nature of the research please contact the mentor(s).

Anticipated Appointment Start Date: Spring/Summer 2021. All start dates are flexible and vary depending on numerous factors. Click [here](#) for detailed information about start dates.

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Appointment Length: The appointment will initially be for one year and may be renewed up to three or 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 ORISE.EPA.ORD@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 with completion by June 30, 2021. Degree must have been received within five years of the appointment start date.

Preferred skills:

- Experience in experimental design and statistical analysis, handling and performing experiments in laboratory animal models, and performing standard molecular biology techniques (e.g. genomic isolations, qRT-PCR, and protein assessments)

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree received within the last 60 months or anticipated to be received by 6/30/2021 11:59:00 PM.
- **Discipline(s):**
 - **Communications and Graphics Design** (2 )
 - **Computer, Information, and Data Sciences** (4 )
 - **Life Health and Medical Sciences** (19 )
 - **Mathematics and Statistics** (1 )
- **Veteran Status:** Veterans Preference, degree received within the last 120 month(s).