

**Faculty and/or Postgraduate Research Participation Program  
U.S. Environmental Protection Agency  
Office of Research and Development  
National Center for Environmental Assessment  
Cincinnati, Ohio**

**Project #: EPA-ORD/NCEA-CIN-2009-03**

A university faculty and/or postgraduate research project is available with the U.S. Environmental Protection Agency's (EPA), National Center for Environmental Assessment (NCEA) in Cincinnati, Ohio.

**Project Description:** The participant will be mentored by scientific staff at NCEA to develop, validate and apply in epidemiological research a multiplex suspension immunoassay for measurement of salivary antibody responses to selected human pathogens including viruses, protozoa and bacteria that can be transmitted through water.

**Specific Tasks:** Under the guidance of a research mentor at NCEA, the participant will contribute to ongoing projects to develop and validate a multiplex suspension immunoassay for measurement of salivary antibody responses to selected human pathogens, and apply this assay to measure incidence of infections in selected communities. The participant could be involved in the following activities.

- Conducting various experiments for assay development, such as expression and purification of recombinant proteins, protein coupling to microspheres, optimization of assay conditions, assay verification using control samples, etc.
- Analyzing saliva samples collected in selected communities to evaluate the effects of practical measures to reduce exposures to waterborne pathogens on incidence rates of infections.
- Interacting with experts in epidemiology and microbiology at the National Center for Environmental Assessment and the National Exposure Research Laboratory.
- Designing experiments, processing data, contributing to data analysis and interpretation, and co-authoring scientific manuscripts.

The participant will have latitude in exercising independent initiative and judgment commensurate with their level of experience and education. EPA will be responsible to review completed projects for adherence to NCEA principles and policies, quality, and soundness of scientific conclusions.

**Qualifications and Skills:** Applicants must be either a faculty members at an accredited U.S. college or university have received a graduate degree (in a biological science, health science, microbiology, immunology or other relevant scientific field) within four years of the desired starting date. Laboratory research experience is preferred. Exceptional individuals with a bachelor's degree in one of these fields, substantial laboratory research experience, proven ability to learn new techniques quickly and track record of intellectual contributions to research resulting in co-authorship of peer-reviewed publications or presentations at professional conferences may also be considered for this project. Applicants cannot have received their final degree more than five years prior to the date of application and must complete all degree requirements before starting their appointment. Candidates should have the ability to review scientific literature and develop sound conclusions based on information from multiple sources.

Experience in providing substantive initiatives in a teamwork environment, demonstrated excellence in oral and written communication, and mastery of ecological, toxicological, and risk assessment principles is strongly desired.

The program is open to all qualified individuals without regard to race, sex, religion, race, age, physical or mental disability, national origin, or status as a Vietnam era or disabled veteran. U.S. citizenship or lawful permanent resident status is preferred (but can also hold an appropriate visa status, however, an H1B visa is not appropriate). **The participant does not become an EPA employee.**

The appointment is full-time for one year and may be renewed for up to two additional years upon recommendation of NCEA and subject to availability of funds. The participant will receive a monthly stipend. The participant must show proof of health and medical insurance.

The Research Participation Program for EPA is administered by the Oak Ridge Institute for Science and Education. ***Please reference Project # EPA-ORD/NCEA-CIN-2009-03 when calling or writing for information.*** For additional information and application materials contact: Research Participation Program/EPA, Attn: Betty Bowling, Oak Ridge Institute for Science and Education, P.O. Box 117, Oak Ridge, Tennessee 37831-0117, Phone: (865) 576-8503 FAX: (865) 241-5219 e-mail: [betty.bowling@ornl.gov](mailto:betty.bowling@ornl.gov).

An application can be found at [www.ornl.gov/orise/edu/EPA/app-gugrgpd.pdf](http://www.ornl.gov/orise/edu/EPA/app-gugrgpd.pdf).