

Research Participation Program
U.S. Environmental Protection Agency
Office of Research and Development
National Risk Management Research Laboratory
Research Triangle Park, North Carolina

Project No #: EPA-ORD/NRMRL-APPCD-2009-07

A research project training opportunity for postgraduates is currently available at the U.S. Environmental Protection Agency (EPA) National Risk Management Research Laboratory (NRMRL) in Research Triangle Park, North Carolina.

Project Description: The research project is with the National Safe Pesticides and Safe Products (SP2) Program under the Office of Research and Development (ORD). This project will focus on source characterization for persistent contaminants in the indoor environments and development of risk management strategies. Immediate research needs include studies on the sources, transport, and risk management options for perfluorinated chemicals, including perfluorooctanoic acid (PFOA) and other perfluorocarboxylic acids (PFCAs), in the indoor environment. This project supports the EPA's mission by (1) providing data for refined risk assessment for perfluorinated chemicals, (2) supporting the Agency's PFOA Stewardship Program (<http://www.epa.gov/oppt/pfoa/pubs/stewardship/pfoastewardshipbasics.html>) through monitoring the market trend for PFCs-containing consumer articles, and (3) developing risk management options for reducing indoor exposure to PFCAs. This training program will provide the participant with the knowledge, skills, and abilities needed to perform research on the presence, distribution, transport, and fate of persistent contaminants, particularly halogenated organics, in the indoor environment with impact at the national and global scales.

Specific Tasks: The selected individual will be trained in tasks related to indoor source characterization and development of risk reduction strategies for persistent chemicals with focus on perfluorinated organic compounds. The participant will also learn by interactions with other individuals and teams on cross-cutting scientific issues related to indoor environmental quality, sustainability, and risk management. With guidance from the mentor, the participant may be involved in the following training activities.

- Developing a statistically sound strategy to monitor the trend of PFC content in consumer articles.
- Participate in the market monitoring process, by determining the PFC content in consumer articles collected by an EPA contractor
- Developing/evaluating analytical methods for other fluorinated compounds (such as perfluorinated phosphonic acids) in consumer articles
- Designing and conducting chamber experiments to determine the rate of PFC off-gassing from sources
- Designing and conducting experiments in the EPA Research House to evaluate methods to reduce PFC content in treated carpeting

- Designing and conducting experiments to determine PFC transfer from sources to settled house dust by using in-house facilities such as micro, small and large environmental chambers, and the Research House
- Preparing reports and peer reviewed papers

The participant will be mentored by Dr. Zhishi Guo. The participant will have latitude in exercising independent initiative and judgment in the research commensurate with the level of training. EPA will review completed papers for adherence to NRMRL principles and policies, quality, and soundness of scientific conclusions.

Qualifications and Skills: Applicants must have received a doctorate degree in environmental science, environmental engineering, chemistry, or a closely related field within five years of the desired starting date. Other applicants, including established scientists interested in new training activities, will be considered on a case-by-case basis. Applicants must possess basic knowledge of environmental science or engineering, environmental monitoring, analytical chemistry, and indoor air quality. Hands-on experience in LC/MS/MS and GC/MS is highly desirable. Knowledge of environmental modeling and numerical computation is a plus.

The program is open to all qualified individuals without regard to race, sex, religion, color, 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).

Stipend and Length of Appointment: The appointment is full-time for one year and may be renewed for up to two additional years at the discretion of NRMRL and subject to availability of funds. The participant will receive a monthly stipend commensurate with the level of experience. Taxes and other federal, state, and local deductions are the responsibility of the intern. The participant must show proof of health and medical insurance. **The participant does not become an EPA employee.**

Additional funds may be made available to reimburse a participant's travel expenses to present the results of his/her research at scientific conferences. No funding will be made available to cover travel costs for interviews, relocation costs, costs of tuition/school fees, or a participant's health insurance.

The Research Participation Program for EPA is administered by the Oak Ridge Institute for Science and Education. ***Please reference Project # EPA-ORD/NRMRL-APPCD-2009-07 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.

An application can be found at www.ornl.gov/orise/edu/EPA/app-gugrgpd.pdf