Research Participation Program
U.S. Environmental Protection Agency
National Exposure Research Laboratory
Research Triangle Park, North Carolina

Project #: EPA-ORD/NERL-HEASD-2009-01

A postdoctoral research project training opportunity is currently available at the U.S. Environmental Protection Agency (EPA) National Exposure Research Laboratory (NERL) in Research Triangle Park, North Carolina.

Project Description: The Human Exposure and Atmospheric Sciences Division (HEASD) within NERL (http://www.epa.gov/heasd/) conducts research and development that leads to improved methods, measurements, and models to assess and predict human health and ecosystem exposures to harmful pollutants and other conditions in air, water, soil, and food. The study of mercury in the atmosphere is an important component of NERL's human health and ecosystem exposure research. HEASD conducts numerous laboratory and field mercury research studies to improve the understanding of fate and transport from the point of emissions into the atmosphere to the deposition processes. Specifically, this research produces source emission and atmospheric process information to improve models that are used to predict mercury and data on the relative source contributions (including local, regional, global) to mercury and trace metal deposition. These research results are used to develop scientifically sound policies for risk management.

A postgraduate research opportunity is available within the Environmental Characterization and Apportionment Branch (ECAB). With mentorship from EPA scientists, the research fellow will develop atmospheric monitoring data sets including speciated mercury observations made at high altitude and arctic research observatories, investigate mercury oxidation/reduction mechanisms, and conduct air quality model simulations.

Specific Tasks: The selected individual will investigate the emission, transformation, and deposition of atmospheric mercury species on local, regional, and global scales. With guidance from the mentor, the participant may be involved in the following research activities.

- Developing data bases of atmospheric monitoring measurements from high altitude, aircraft, and arctic research studies. Applying quality assurance/quality control screening tools and analyzing data for information relating to long range transport, oxidation/reduction mechanisms, source attribution, and atmospheric deposition mechanisms.
- Developing global and regional modeling tools for the analysis of ambient mercury monitoring data.
- Developing manuscripts for submission to peer reviewed scientific journals.

The participant will be mentored by Dr. Matthew Landis. 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 NERL principles and policies, quality, and soundness of scientific conclusions.

Qualifications and Skills: Applicants must have received a doctoral degree 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. The ideal applicant for this position will have expertise in regional and global scale atmospheric mercury modeling; knowledge of atmospheric mercury chemistry; and experience with speciated atmospheric mercury and halide measurement data. He/she will be able to conceptualize and execute an original plan of research, establish research priorities and deadlines, judge the completeness and accuracy of research results, and present his/her research findings to diverse audiences, both orally and in writing.

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). **The participant does not become an EPA employee.**

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

A full-time post-doctorate participant would receive a monthly stipend up to $5,800. Funding may be made available to reimburse the 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/NERL-HEASD-2009-01 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@orau.org.**

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