

A postdoctoral research project training opportunity is currently available at the U.S. Environmental Protection Agency's (EPA) National Risk Management Research Laboratory (NRMRL). The appointment will be served with the Air Pollution Prevention and Control Division (APPCD) in Research Triangle Park, North Carolina.

APPCD helps provide the basis for the formulation of EPA's environmental policies and programs by playing a vital role in the EPA scientific research mission. APPCD: helps develop and evaluate solutions to environmental problems faced by EPA, local and state agencies, and the public; provides information and tools that enable EPA to develop the cost effective and sustainable approaches to protecting human health and the environment; and supports EPA's environmental protection goals by providing direct support to EPA's regulatory and voluntary programs and by developing and evaluating emissions measurement, emissions control, and cost effective risk management strategies. APPCD concentrates efforts in four research areas:

- Climate Change/Technology Assessment,
- Source/Emissions Characterization,
- Combustion/Emission Control, and
- Indoor Air Quality.

Light absorbing organic aerosol, i.e. brown carbon, can be a major contributor to light absorption of ambient particulate matter in the UV to mid-visible region of the spectrum, impacting the Earth's radiative balance. This research project focuses on developing methods to distinguish the optical and chemical characteristics of brown carbon among different source types.

The research participant will conduct laboratory tests involving the measurement of the optical properties of brown carbon. S/he will develop methodologies to link chemical characterization with optical properties to identify light absorbing organic compounds or classes of compounds from primary combustion sources and secondary formation in the atmosphere.

Through this opportunity, the research participant will be trained in advanced chemical analysis methods, particulate sampling, and be provided the opportunity to develop measurement methods to characterize and identify brown carbon sources. S/he will have the opportunity to present results at scientific conferences and publish manuscripts. Additionally, s/he will have latitude in exercising independent initiative and judgment in the research commensurate with the level of training.

Qualifications:

Applicants must have received a doctoral degree in atmospheric chemistry, analytical chemistry, environmental science, or a related field (i.e., physical sciences or engineering) within five years of the desired starting date, or completion of all requirements for the degree should be expected prior to the starting date. Experience with particulate sampling, sample extraction, chromatography, mass spectrometry, and UV-vis spectroscopy techniques is desired.

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 a candidate also may hold an appropriate visa status; an H1B visa is not appropriate). Guidelines for non-U.S. citizens may be found at <http://orise.orau.gov/epa/applicants/immigration.htm>.

The appointment is full time for one year and may be renewed upon recommendation of EPA and contingent on the availability of funds. The participant will receive a monthly stipend. 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 pre-appointment visits, relocation costs, tuition and fees, or a participant's health insurance. The participant must show proof of health and medical insurance. **The participant does not become an EPA employee.**

Technical Contact:

The mentor for this project is Dr. Amara Holder (holder.amara@epa.gov).

How to Apply:

An application can be found at <http://orise.orau.gov/epa/applicants/application.htm>. *Please reference Project # EPA-ORD/NRMRL-APPCD-2014-06 when calling or writing for information.*