

Environmental Health

The Fellow will be assigned to the Division of Environmental Health Epidemiology (DEHE), in the Bureau of Epidemiology, Pennsylvania Department of Health. This Division is the Department's program responsible for the study and prevention of occupational and environmental health problems, including environmental epidemiology, occupational health tracking and investigations, toxicology, adult blood lead poisoning surveillance, asthma epidemiology, health assessment focusing on the state's National Priority List (NPL) hazardous waste sites, and environmental public health tracking.

The Fellow will have the opportunity to work with a multidisciplinary team in DEHE. DEHE provides statewide leadership through science and service that promotes health and quality of life by preventing or controlling adverse health effects relating to the environment. DEHE provides technical environmental public health advice, support, and education to other agencies and the public in this area. In its daily activities, DEHE interfaces with communities, state and federal agencies, and other groups involved with environmental protection and environmental and occupational health services. DEHE is comprised of five programs: General Environmental Health, Health Assessment, Environmental Public Health Tracking, Occupational Health, and Toxicology:

1. **The General Environmental Health Program** provides epidemiological, medical, and environmental health support to others in the resolution of environmental health problems and emergencies that require public health attention. This support can take the form of environmental health consultations, assessments, studies, investigations, surveillance, and evaluations as well as public health recommendations.
2. **The Health Assessment Program (HAP)** prepares or provides public health assessments, health consultations, community and health professional education, and technical assistance in order to address the public health issues surrounding hazardous waste sites in Pennsylvania. The program continues to be funded through a Cooperative Agreement with the federal Agency for Toxic Substances and Disease Registry (ATSDR) that began in 1989. Through this program, HAP has partnered with ATSDR to prevent or reduce exposure and illnesses resulting from exposure to hazardous waste sites; determine the human health effects associated with exposures to hazardous waste sites; provide health education to community members about the health effects of hazardous substances and how to reduce their exposure; and provides health education to health care professionals serving communities impacted by hazardous waste sites.
3. **The Environmental Public Health Tracking (EPHT) Program** works collaboratively with the Centers for Disease Control and Prevention (CDC), the United States Environmental Protection Agency (EPA), and other grantees to build a sustainable national network that will leverage existing sources of environmental hazard and exposure data already being collected by the EPHT primary partner, the Pennsylvania Department of Environmental Protection (PADEP), and health effects data already being collected by the Pennsylvania

Department of Health (PADOH). The integration of environmental data with health data can be used to provide a basis for associating environmental exposures with adverse health conditions, as well as identifying spatial and temporal relationships that can be used to guide intervention. The program deals specifically with chronic diseases and other non-infectious health effects that may be related to exposure to chemicals, physical agents, biomechanical stressors, or biological toxins in the environment. The program continues to be funded through a Cooperative Agreement with CDC that began in 2002.

4. **The Occupational Health Program** investigates occupational health problems throughout the state and makes public health recommendations to correct these problems, provides occupational health outreach and education to targeted groups in need of this service, provides occupational health consultations in response to outside requests, and administers the Department's adult blood lead surveillance program.
5. **The Toxicology Program** reviews and evaluates environmental data and provides information on the effects of chemicals on human health and recommendations to protect the public health, in response to requests from Commonwealth agencies and the public for technical assistance or health consultation. This may include developing health risk guidelines for use by environmental agencies, supporting agencies involved in the development of Commonwealth fish advisories, and providing health advice to other state agencies or the public on environmental health issues.

The fellow will work directly with the Environmental Health Division Director, Dr. James Logue, and the Health Assessment Section Chief, Dr. Mark White. The fellow will participate in all activities within the Bureau of Epidemiology. The fellow will rotate with the different programs in the Division throughout the length of the fellowship. The fellow will be assigned to a specific project pertinent to that program during the rotation assignment. . The anticipated short-term projects and work for the fellow within each program rotation will be varied in type and scope based on the fluid needs of the programs at any given time and are difficult to predict. However, it is anticipated that the fellow's short-term projects and activities will be on an *ad hoc* basis depending upon the fellow's interest and the program needs. Typical expected activities by the fellow would be in keeping and in line with the descriptions listed above regarding each of the program's purviews and responsibilities, and could range from assisting in activities or performing epidemiologic analysis and interpretation of health effects and exposure data from several available databases for:

- a. the production of environmental health consultation reports or the performance of environmental exposure investigations
- b. the production of reports regarding occupational health investigations or the performance of such investigations
- c. the production of asthma surveillance reports or the performance of asthma-related public health activities
- d. other similar sorts of activities

The fellow will also be able to choose one long-term project that will continue for the entire length of the assignment. Current long-term projects that will be available for consideration by the fellow include but will not be limited to:

1. The Asthma School Project (ASP)

This project is a descriptive pilot project involving asthmatic students in those Pennsylvania public schools with the highest prevalence rates of asthma. An article on the ASP was recently published [Logue J.N., White M., Marchetto D. October 2007. Pennsylvania's Asthma School Project and Descriptive Pilot Investigation : A Focus on Environmental Health Tracking. Journal of Environmental Health 70(5): 21-27], and the salient methods, findings, and discussions of the project are provided in more detail in that reference article. There is long-term potential for expansion, further study, and/or activity regarding or related to the ASP by the fellow.

2. Polycythemia Vera Investigation

Recent interest and activities have been undertaken at both the state and federal level regarding the investigation into the issue of elevated polycythemia vera and other myelodysplastic or myeloproliferative syndrome disorders in a region of Northeastern Pennsylvania, with a special focus on potential environmental health exposures and issues. The Pennsylvania Department of Health (PADOH) Division of Environmental Health Epidemiology, as well as other Divisions within PADOH, and the federal Agency for Toxic Substances and Disease Registry (ATSDR) have been collaborating regarding this investigation of elevated rates of this rare form of blood cancer. There is long-term potential for activity regarding or related to this investigation by the fellow.

Data collection and analyses will be an ongoing part of his/her work. The fellow will not have supervisory responsibilities. Dr. James Logue will serve as the primary supervisor, while Dr. Mark White will serve as the secondary supervisor.

Assignment Location: **Harrisburg, PA**

Primary Mentor: James N. Logue, DrPH, MPH
Epidemiologist Manager
Director, Division of Environmental Health Epidemiology
Pennsylvania Department of Health

Advanced Degrees: DrPH, Columbia University, New York City (1978)
MPH, University of Michigan, Ann Arbor (1971)

Secondary Mentor: Mark V. White, MD, MPH
Epidemiologist
Chief, Health Assessment Section
Division of Environmental Health Epidemiology
Pennsylvania Department of Health

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Advanced Degrees: MD, Georgetown University, Washington D.C. (1999)
MPH, University of Pittsburgh (2000)