



Introduction—Environmental Air Toxics: Role in Asthma Occurrence?

Brenda Gehan

Mickey Leland National Urban Air Toxics Research Center, Potomac, Maryland, USA

–*Environ Health Perspect* 110(suppl 4):499 (2002).

<http://ehpnet1.niehs.nih.gov/docs/2002/suppl-4/499gehan/abstract.html>

The mission of the Mickey Leland National Urban Air Toxics Research Center is to develop and support research that will yield a better understanding of the potential risks posed to human health by exposure to air toxics. The Center's research program, developed collaboratively by scientific experts from academia, industry and government, seeks to fill the gaps in scientific data that are required to make sound environmental health public policy decisions.

In formulating its research program, the Leland Center has emphasized the importance of obtaining accurate personal exposure data for study populations in order to understand the relationship between exposure and health effects. Projects supported by the Center have collected individual measurements of exposure to a variety of air toxics, including volatile organic compounds, aldehydes, and metals on fine particulates. These data sets will contribute to our knowledge of population exposures to air toxics, an area in which data have been lacking. Three projects sponsored by the Center are described in this issue of *Environmental Health Perspectives Supplements*. In two of these studies, the RIOPA (Relationship of Indoor, Outdoor, and Personal Air) Study being conducted at the Environmental and Occupational Health Sciences Institute (a joint institute of Rutgers, the State University of New Jersey, and UMDNJ-Robert Wood Johnson Medical School) in Piscataway, New Jersey and the TEACH (Air Toxic Exposures Among Inner City High School Students in New York City and Los Angeles) Study being conducted at the Mailman School of Public Health at Columbia University in New York City, measurements of indoor, outdoor, and personal air concentrations have been collected in urban areas. In the third study, the hypothesis of an association between particulate air toxic metals and adverse respiratory outcomes is being investigated at Washington State University, using data from an ongoing project in Spokane, Washington.

One of the Center's early research topics was the possible association between urban air toxics and asthma incidence and exacerbation.

The topic was addressed in 1993 by a rigorous literature survey on the subject sponsored by the Center, and a Workshop in 1994 at which researchers from a broad range of disciplines described the state of scientific knowledge about asthma and air toxics (1). The state of the science 7 years later was presented under sponsorship of the Center in 2001 at the symposium "Environmental Air Toxics: Role in Asthma Occurrence?" held 30–31 May 2001 in Houston, Texas. The goals of the symposium were to *a*) develop most recent conclusions on the relationship between air toxics and environmental asthma, *b*) identify gaps in information and understanding related to the potential roles of air toxics in asthma causation and/or exacerbation, *c*) recommend new research programs that would address the identified gaps in information and data, and *d*) publish the important outcomes of the symposium in a peer-reviewed journal.

Topics covered during the symposium included lifestyle and biological influences on asthma pathogenesis, epidemiology of asthma, impact of air pollutants on asthma, occupational asthma and implications for the public at large; and the impact of air toxics on asthma and implications for research programs.

The Leland Center acknowledges the efforts and vision of Raymond J. Campion in developing plans for the symposium, as well as the efforts of Carolyn Wade, John Taunton, and the members of the Organizing Committee for their work in preparing the program.

REFERENCE

1. Holian A, ed. Air Toxics and Asthma: Impacts and End Points. *Environ Health Perspect* 103(suppl 6):209–271 (1995).

Address correspondence to B.M. Gehan, The Mickey Leland National Urban Air Toxics Research Center, 7901 Turncrest Dr., Potomac, MD 20854-2771 USA.

Funding for the Symposium on Environmental Air Toxics: Role in Asthma Occurrence? was provided by the American Chemistry Council (ACC), American Lung Association (ALA), American Petroleum Institute (API), Centers for Disease Control and Prevention (CDC), ExxonMobil Corporation, National Institute of Environmental Health Sciences (NIEHS), U.S. Environmental Protection Agency (EPA), and University of Texas Health Science Center at Houston.

Received 5 December 2001; accepted 12 December 2001.