

PM Centers 1999-2005

Harvard University PM Research Center (Director: Petros Koutrakis)

The Center assessed human exposures to particles and gases in order to better understand their health effects; identified individuals who are susceptible to the effects of air pollution and assessed the chronic effects of particulate exposures; and identified the particulate and gaseous air pollutants responsible for increased cardiac vulnerability and defined the biological mechanisms that lead to this outcome.

Northwest Research Center for Particulate Air Pollution and Health (Director: Jane Koenig)

The theme of the research performed at the Northwest PM Center was combustion-derived fine particulate composition, exposures and health effects. The Center worked to elucidate the relationships among ambient air quality, population exposures, and population health. The three main areas of research focus included: epidemiology; exposure and health effect assessments in susceptible populations; and mechanisms of toxicity.

New York University PM Center (Directors: Morton Lippmann, George Thurston)

The focus of the NYU PM center was to develop and conduct research identifying and characterizing the physical and chemical properties of PM that adversely impact human health. The hypothesis of the Center was that specific chemical species within PM and within certain particle size ranges are primarily responsible for PM's health effects.

University of Rochester PM Research Center (Director: Gunter Oberdorster)

The Center developed its research program around the central hypothesis that ultrafine particles (approximately 10-50 nm in size) occurring in the urban atmosphere cause adverse cardiovascular and respiratory health effects.

Southern California Particle Center (Director: John Froines)

The principal theme of the Center, mobile source pollution and health effects, was explored by identifying the important physical/chemical characteristics of PM responsible for the adverse health effects associated with PM and co-pollutant exposures.

For more information about the PM Centers see: <http://es.epa.gov/ncer/science/pm/centers.html>

PM Centers 2005-2010

Harvard University PM Research Center (Director: Petros Koutrakis)

The fundamental objective is understanding how specific PM characteristics and sources impact inflammation, autonomic responses, and vascular dysfunction (renewed center).

Johns Hopkins PM Research Center (Director: Jonathan Samet)

The Center's conceptual foundation lies in mapping health risks of PM across the US, based on analysis of national databases on air pollution, mortality, and hospitalization (new center).

University of Rochester PM Research Center (Director: Gunter Oberdorster)

Studies are testing the hypothesis that specific physicochemical components of fine PM cause oxidative stress and trigger cardiovascular adverse health effects, with specific emphasis on events leading to endothelial dysfunction (renewed center).

San Joaquin Valley Aerosol Health Effects Center at UC Davis (Director: Anthony Wexler)

The Center is investigating the mechanistic links between ambient particles and the health effects that they elicit including understanding the characteristics of the particulate pollutants and their gaseous co-pollutants that elicit these responses (new center).

Southern California Particle Center (Director: John Froines)

The Center is investigating the underlying mechanisms associated with PM health effects and how these vary with the source, chemical composition and physical characteristics of PM (renewed center).

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