

UCLA Researchers Will Lead \$11 Million, Five-Year Study of Particulate Air Pollution in South Coast Air Basin

For Immediate Release - June 22, 1999

Researchers from the UCLA Institute of the Environment and the School of Public Health have received \$11.2 million in state and federal grants to create a multi-university center for studying air pollution caused by tiny particulate matter in the Los Angeles area.

The Southern California Center for Airborne Particulate Matter (SCCAPM) will better determine the sources of particulate pollution, probe the chemical nature of particles and investigate the health effects of breathing particulates. Particles are microscopic dust created by combustion of fuels, erosion from automobile tires, industrial releases, natural phenomena such as fires and wind, and many other means.

Funded by an \$8.7 million grant from the U.S. Environmental Protection Agency and a \$2.5 million grant from the California Air Resources Board, the center will take part in a national effort to better define and understand air pollution caused by particulate matter.

"This study will not only have major implications for the South Coast Air Basin, but for air pollution policy on the national and international level as well," said center director John Froines, a UCLA School of Public Health toxicologist who heads the 30-person research effort. "This region has one of the best collections of air pollution scientists in the country and this is the first time we have all collaborated together on a project of this magnitude." U.S. Senator Barbara Boxer (D-CA), who strongly supported UCLA's application for EPA funding, said, "This is great news for UCLA and for Southern California. Particulate air pollution is hazardous to the health of everyone in the Los Angeles air basin, especially children. With EPA's assistance the Southern California Center for Airborne Particulate Matter will enhance our ability to understand particulate pollution and protect public health."

Particulate matter is one of the worst air pollution problems in the four-county South Coast Air Basin. Research has shown that breathing the tiny particles can increase asthma attacks and cause childhood respiratory problems. Particulate pollution is blamed for the premature deaths of thousands of Americans every year.

In addition to involving 16 researchers at UCLA, the study will include researchers from the University of Southern California, the University of California, Riverside, the University of California, Irvine, the California Institute of Technology and Rancho Los Amigos Medical Center.

A key component will be construction of a transportable exposure facility to study how exposure to different types of particulate pollution affects the public health. The one-of-a-kind

"concentrator" will allow researchers to conduct exposure studies using samples of particulates actually collected from the region's air, rather than created in a laboratory.

The concentrator, supported by the California Air Resources Board grant, will be the only one in the world capable of isolating ultrafine and coarse particulate matter. The equipment will be built through a collaboration of scientists and engineers at UCLA and USC.

"This equipment will allow us to investigate the health effects of particulates using a realistic sample of the air people breathe in the Los Angeles region, which has a broad array of chemical contaminants," Froines said.

Particulates in the South Coast Air Basin include organic compounds from fuel combustion, heavy metals created by erosion and materials called bioaerosols such as pollen and fungi. By applying the new tools, researchers hope to learn something about the relative health hazards posed by the different pollutants.

"We know that particulate air pollution causes health problems," Froines said. "But we don't know much about the relative health risks posed by the different chemical components that make up particulate pollution. This center will seek to examine that issue."

The particulate project will be done in association with the University of Southern California's Children's Health Study, which is following 3,600 school children in 12 local communities to study the chronic health effects caused by air pollution. Preliminary results from that study suggest a relationship between particulate pollution and chronic respiratory problems.

The Southern California Center for Airborne Particulate Matter is one of five particulate research centers awarded grants as part of an EPA effort to learn more about the health problems caused by exposure to particle pollution.

Other institutions receiving EPA grants are the University of Rochester, the University of Washington, New York University School of Medicine and the Harvard School of Public Health.