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INNOVATIVE RESEARCH FOR A SUSTAINABLE FUTURE

CLEAN AIR RESEARCH CENTERS

Background

The U.S. Environmental Protection Agency (EPA) is at the forefront of advancing air quality science. In the real world, people are exposed to multiple air pollutants, yet many conclusions about air pollution risks are based on research that considers only one pollutant at a time.

EPA is addressing this issue by studying the health effects of multiple air pollutant mixtures in addition to single pollutants.

To further advance research on air pollution, EPA is investing nearly $32 million between 2011 and 2016 in four university-based Clean Air Research Centers (CLARCs) located across the Unites States.

The CLARCs offer an opportunity to approach complex air quality and health issues in an integrated and multidisciplinary manner that would not be possible through individual grants to single investigators.

The research will provide important information that can be used to protect the public health.

Research Focus

Each Center will receive approximately $8 million over the five-year grant period to study a range of exposures to various air pollution sources and mixtures and their associated health effects.

EPA is expecting the CLARCs to advance our understanding of the human health effects of exposures to particulate matter, ozone, and other air hazards. The CLARCs will also address how social conditions and other factors affect health outcomes from exposure to air pollution.

While each CLARC will have its own research emphasis, the Centers will also work together to conduct cross-center collaborative research.

Southeastern Center for Air Pollution and Epidemiology is a collaboration between Emory University and the Georgia Institute of Technology. This Center will combine novel measurement techniques with air pollution models to provide an assessment of the health risks of air pollution mixtures. Research will consider how social conditions (e.g. commuting, traffic, living and working locations) impact health.

Great Lakes Air Center for Integrative Environmental Research at Michigan State University is exploring the connections between air pollution and obesity. Air pollution has been linked to increased risk of heart attacks and strokes. Air pollution has been linked to a myriad of heart problems. This research will focus on the effects of fine particulate matter and ozone on cardiovascular health looking at important subpopulations at risk.

University of Washington Center for Clean Air Research is examining how pollution from roadways affects cardiovascular health. The research will integrate exposure, epidemiological, toxicological, clinical, and statistical sciences to study the cardiovascular hazards of recent and aged roadway emissions. Studies will look at how social determinants and other factors (e.g., stress) potentially affect health.

Harvard University Clean Air Research Center is investigating the effects of short- and long-term exposures to individual pollutants, pollution sources, and multi-pollutant mixtures on the brain, cardiovascular system, inflammation, birth weight/growth, and cardiovascular disease. The research will identify social factors that may contribute to health impacts associated with air pollution.

Learn more at:

www.epa.gov/ncer/clarcs
www.epa.gov/airscience

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