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Objectives

Abstract: Air pollution has been consistently linked to numerous adverse health outcomes, including premature mortality, cardiorespiratory, and pregnancy outcomes. Over the past few years there has been increasing interest in characterizing the impacts of air pollution exposure on the nervous system and, specifically, its role in neurodegeneration. This presentation will provide an overview of findings from Dr. Kioumourtzoglou's lab on the link between air pollution exposures (predominantly to fine particulate matter and its components) and multiple neurodegenerative outcomes, including Alzheimer's and Parkinson's diseases and amyotrophic lateral sclerosis. The analyses leverage nationwide and state-wide health records from the United States, Denmark, and New York State. Exposure assessment was conducted using concentrations measured at monitoring sites and predicted from models at high spatio-temporal resolution. Overall, consistently harmful associations were observed across studies and outcomes, with effect estimates varying across pollutants examined.

Short bio: Marianthi-Anna

Kioumourtzoglou is an environmental engineer and epidemiologist. She holds a Master of Science in Public Health from the Environmental Sciences and Engineering Department at the University of North Carolina at Chapel Hill and a Doctor of Science in Environmental Health from the Harvard TH Chan School of Public Health. She is currently an Associate Professor at the Department of Environmental Health Sciences at Columbia University's Mailman School of Public Health. Her research focuses on applied statistical issues related to environmental epidemiology, including quantifying and correcting for exposure measurement error, exposure prediction uncertainty propagation, and assessment of high-dimensional and complex exposures in health analyses. Her research focuses on air pollution epidemiology and climate and health.

Speakers

Speaker: Marianthi-Anna Kioumourtzoglou, Associate Professor, Department of Environmental, Health Sciences, Mailman School of Public Health, Columbia University
Host: Oriol Jorba, Leading Researcher, Atmpospheric Composition Group, Earth Sciences

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