



Environmental Science Graduate Program Seminar Series

Adverse Effects from Exposure to Climate Change Related Pollutants in Vulnerable Census Tracts and Health Dashboard Creation

Carissa Moore

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Abstract

Exposure to climate change related environmental contaminants \ such as airborne fine particulate matter (PM2.5) and associated environmental pollutants (traffic related pollutants and metalloids) are strongly associated with increased morbidity and premature death from cardiovascular disease (CVD) particularly in exposed female African American adults who typically already suffer from a wide range of illnesses. While this is particularly evident in environmentally compromised communities, very little is known about how non-chemical stressors and exposures from the natural, built, and social environment, coupled with individual behavioral and inherent characteristics, propagate the effects of chemical exposures on the lifetime progression of disparate cardiovascular health outcomes in African American women. My proposed project will use the Public Health Exposome framework (PHE) to advance our understanding of associations between a combination of chemical and non-chemical stressors, personal characteristics, and CVD risk among women as participants in a observational cohort in African American women. Stress is a significant contributor to poor cardiovascular health and can be quantified as a function of allostatic load (psychological, environmental, and social measures). My proposed project will integrate data from companion research projects in the laboratory to estimate the cumulative risk for subclinical CVD development as a function of exposure to CCREP and non-chemical stressors.