

2016 Healthy Homes Technical Studies Program Awards

- 1) **Illinois Institute of Technology** will be awarded \$699,611 to investigate the effectiveness of three approaches to residential mechanical ventilation systems in existing homes in reducing indoor air pollutants, maintaining environmental conditions and ventilation rates, and improving asthma health outcomes. They will also evaluate the impacts on building energy use and the costs of installation and operation in assessing the costs and benefits of using the different systems. Forty-five (45) low-income households in Chicago, IL with at least one asthmatic resident will be recruited for participation in the 3-year study. There will be four weeklong periods of data collection for approximately one year before installation, followed by four weeklong periods approximately one year after the installation. The team will administer standardized (ATC) asthma outcome questionnaires to residents every 2 months throughout the duration of the study, for a total of 12 months of asthma outcome data collected over the course of two years.

Contact Person: Robert Lapointe; lapointe@iit.edu

- 2) The **University of Massachusetts Lowell** will be awarded \$700,000 to conduct a 3-year study assessing the sustainability of health outcomes and home environment improvements following initial healthy homes educational/behavioral and environmental interventions among children and elders with asthma. The study uses cohorts living in public or subsidized housing to conduct a follow-up round of health and environmental trigger assessments with 100 children and 50 elders with asthma, 2-6 years after the original intervention. The study will evaluate whether an additional intervention by community health workers creates added benefit, improving the sustainability of asthma health indicators and environmental trigger behaviors.

Contact Person: Linda Concino; linda_concino@uml.edu

- 3) The **Trustees of Columbia University in the City of New York** will be awarded \$700,000 to conduct a 3-year study to develop resident-focused methods to improve the level of compliance with existing smoke-free policies in low income multiunit housing in New York City. The study will employ a Harm Reduction, Building Ambassadors and Resident Engagement model of smoke-free housing policy compliance and enforcement. The research team will also track environmental exposures and health outcomes among residents and compare them at two time points. Results are expected to improve the evidence base for the efficacy of smoke-free policy compliance with an aim to develop and disseminate tools and resources to maximize successful policy implementation in affordable housing settings.

Contact Person: Alicia Bergdolt-Batista; grants-office@columbia.edu

- 4) **The University of Tulsa** will be awarded \$699,958 to conduct a study to develop a technically-defensible and economically practical tool for defining the dampness-associated fungal contribution to a building's fungal ecology. Specific objectives include the following: (1) Conduct an extensive, nation-wide field campaign to sample fungi in water damaged and non-water damaged homes; and (2) Leverage this nationwide fungal ecology data to produce indices that quantitatively define the contributions of dampness-associated fungi in U.S. homes. The results will be used to develop indices based on fungal DNA analyses that can be used to identify homes with abnormal patterns (i.e., indicative of mold problems) and to confirm the effectiveness of remediation to mitigate mold and moisture problems.

Contact Person: Debbie Newton; deborah-newton@utulsa.edu

- 5) **Eastern Virginia Medical School** will be awarded \$504,592 to conduct a 3-year study of the implementation of a smoke-free housing (SFH) policy implemented in multiunit public housing administered by the Norfolk Redevelopment and Housing Authority. Data will be collected through longitudinal surveying of residents, focus groups, and environmental sampling, and will address the following issues: the impact of the policy on indoor air quality; the impact of SFH policy on smoking behaviors and use alternative tobacco products (e.g., e-cigarettes), and resident knowledge and attitudes regarding the policy. The study will employ community health workers who are recruited from the resident population.

Contact Person: Yolanda Demory; demoryyf@evms.edu