U.S. Department of Housing and Urban Development

FOR RELEASE
Friday
October 7, 2022

HUD AWARDS $5.7 MILLION IN RESEARCH GRANTS TO REDUCE HOUSING-RELATED HEALTH HAZARDS

Funding to improve methods to identify and control key residential hazards

WASHINGTON - The U.S. Department of Housing and Urban Development (HUD) today awarded $5.7 million to seven universities and public health organizations to improve our understanding of the longer-term impact of housing interventions targeting lead and other residential hazards, such as from pests, injury hazards, and asthma triggers

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FY 2022 Lead and Healthy Homes Technical Studies Grant Awards				
State	**Legal Name**	**City**	**Grant**	**Amount**
IL	Board of Trustees of the University of Illinois	Champaign	HHTS*	$924,410
MA	President and Fellows of Harvard College	Cambridge	HHTS	$924,984
MD	National Center for Healthy Housing, Inc.	Columbia	HHTS	$740,000
NJ	Montclair State University	Montclair	LTS**	$699,981
PA	University of Pittsburgh	Pittsburgh	HHTS	$918,709
PR	Puerto Rico Science, Technology & Research Trust	San Juan	HHTS	$925,000
SD	University of South Dakota	Vermillion	HHTS	$552,381

*** HHTS – Healthy Homes Technical Studies**
**** LTS – Lead Technical Studies**

2022 Lead and Healthy Homes Technical Studies Grant Award Summaries

Illinois

The Board of Trustees of the University of Illinois will be awarded $924,410. The University will develop a customizable sensor system that will integrate data from multiple sensors from different manufacturers, a dashboard that provides timely actionable feedback to residents, and data access by professionals authorized by residents. Sensor packages will be customized based on the specific details of the home and the residents and will be able to measure different contaminants in various parts of the home as appropriate. The primary objective of the study is to empower residents to target and effectively manage individual-specific triggers of respiratory ailments associated with poor indoor air quality.

Maryland

National Center for Healthy Housing, Inc. will be awarded $740,000 to study the indoor air quality benefits of a gas range replacement program. The Center will partner with Lincoln Westmoreland Housing, a community-based organization that provides low-income housing and supportive services, and Yachad, a community-based organization with experience in healthy housing asthma education. The study's main objective is to create evidence-based guidance for housing, health, and environmental programs and policymakers on the benefits of gas range replacement in reducing asthma triggers to improve the health and quality of life of residents who have asthma and other respiratory health issues.

Massachusetts

The President and Fellows of Harvard College will be awarded $924,984 to test the acceptability and feasibility of an adapted version of their Building Success smokefree implementation toolkit. The adaptation will fully integrate ancillary social and health services into a smokefree implementation framework to meet the needs of Permanent Supportive Housing (PSH) residents. The study will examine indoor air quality, resident exposure to secondhand smoke, and smoking consumption at 12 months post-intervention. The primary objective of this project is to develop evidence-based smokefree policy implementation strategies that meet the special needs of PSH Communities.

New Jersey

The Montclair State University will be awarded $699,981 to develop a model to simulate and predict the risk of lead exposure and resulting increased blood lead concentrations based on bio-accessible lead concentrations in the environment, and how socioeconomic status, policy / scholarly intervention, and collective community behaviors influence that concentration. The University will use Jersey City, NJ, as its study site for data collection and model validation.

Pennsylvania

The University of Pittsburgh will be awarded $918,709 to conduct studies and develop a comprehensive home health assessment and care planning tool to deliver home and community-based services (HCBS), such as home modifications, therapy, and personal assistance care. The University will also capture key environmental health and safety hazards information that can be used as an add-on component to current assessment tools for Medicaid HCBS or other home healthcare services. The University also will prepare training materials with partner organizations for dissemination.

Puerto Rico

Puerto Rico Science, Technology & Research Trust will be awarded $925,000 to conduct a randomized controlled study in the municipality of Ponce in southern Puerto Rico that aims to determine whether the installation of screens in windows and doors of randomized houses leads to a measurable reduction in presence and number of female Aedes mosquitoes inside intervention homes compared to control homes. Secondary goals include analyzing information on confirmed Dengue virus, Chikungunya virus, and Zika virus human infection in intervention and control homes, and information on acceptability and cost.

South Dakota

The University of South Dakota will be awarded $552,381 to investigate the ecological and biological risk of emerging infectious disease transmission by bed bugs using an integrative approach and modern tools. First, high-depth DNA/RNA sequencing will be conducted on a large repository of bed bugs collected from diverse dwellings to determine the frequency with which bacteria and viruses with the potential to cause human disease are found in the insects. Then, the University will study laboratory-reared bed bugs to determine if they are biologically capable of transmitting currently relevant emerging pathogens that circulate in urban settings. The studies will form the first broad, systematic investigation of the associations between bed bugs and infectious disease agents.

FOR RELEASE
Wednesday
October 13, 2021

HUD AWARDS OVER $15 MILLION IN RESEARCH GRANTS TO REDUCE HOUSING-RELATED HEALTH HAZARDS AND IMPROVE ENERGY EFFICIENCY

Funding to improve methods to identify and control key residential hazards

WASHINGTON - The U.S. Department of Housing and Urban Development (HUD) today awarded $15.7 million to 18 universities, public health, and housing organizations to conduct housing-related hazard and energy efficiency research studies. Provided through HUD's Office of Lead Hazard Control and Healthy Homes (OLHCHH), the research grants aim to identify and improve methods for detecting and controlling lead and other housing-related health and safety hazards and will incorporate weatherization into residential lead and healthy homes interventions.

Providing funds for these studies and demonstrations is extremely important for developing knowledge that helps to create and sustain new and existing housing that supports the health of residents, especially populations at higher risk of being affected by home health hazards, such as young children and seniors.

"A home is a determinant of health, and today, too many homes are plagued with lead-based paint hazards, which disproportionality impact communities of color. HUD is committed addressing this issue and doing so in a way that places environmental justice and equity at the center of our efforts," said Matthew Ammon, Director of the Office of Lead Hazard Control and Healthy Homes. "Supporting research and demonstrations on housing-related health hazards is the basis for creating and maintaining homes that support the health of occupants and improve energy efficiency."

HUD estimates that approximately 24 million older homes in the U.S. still have significant lead-based paint hazards, to date. While most public housing has already undergone abatement, there are still some properties where lead-based paint remains, and where hazards have redeveloped. HUD's Office of Lead Hazard Control and Healthy Homes promotes state and local efforts to eliminate dangerous lead-paint and other housing-related health and safety hazards from homes of lower-income families, stimulate private sector investment in controlling these hazards, support cutting-edge research on methods for assessing and controlling housing-related health and safety hazards, and educate the public about the dangers of hazards in the home.

HUD's Lead and Healthy Homes Technical Studies Grant Program is awarding research grants to the following universities, public health, and housing organizations to identify and clean up lead hazards in their properties:

2021 Lead Technical Studies Grant Awards

Kansas

Kansas State University will be awarded $700,000 to measure the effectiveness of soil treatments (such as using phosphorus, iron, and exceptional quality biosolids) to reduce the hazard of lead exposure in urban soils. The target population is young children in Kansas City's urban core, where some lead poisoning rates exceed nine times the national average. Study objectives include: 1) identify improved, cost-effective protocols to manage commonly elevated urban soil lead; 2) build community capacity to use these protocols where they are most needed to prevent children having elevated blood lead levels; and 3) determine the efficacy of mitigation. Partners include City of Kansas City, Missouri; U.S. Environmental Protection Agency; and Children's Mercy Hospital.

Maryland

National Center for Healthy Housing (NCHH) will be awarded $699,696. Working with the Lead and Environmental Hazards Association, the NCHH will first establish a database standard for the collection of high-quality paint and dust lead data, and then assemble a dataset of existing lead evaluation reports of adequate size to answer questions such as the relative risk of deteriorated LBP on various housing components. This information is expected to help improve lead hazard control policy and practice in the US. In addition, the study will demonstrate the feasibility of creating a privately sourced, lead hazard tracking dataset, similar in concept to the CDC's national tracking system for radon.

QuanTech, Inc. will be awarded $648,549 to test the new EPA floor clearance standard for efficacy. The study objectives are: 1) determine the efficacy of a single wipe, 1 square foot floor sample for detection of clearance failures at the new level; 2) determine the efficacy of the ("composited") four-wipe, 4 square foot floor sample, as shown in an existing American Society for Testing and Materials standard for detection of clearance failures at the new level; and 3) determine the efficacy of EPA's cleaning verification for detection of clearance failures at the new level.

Michigan

Michigan State University will be awarded $699,264 to work with the Lansing Housing Commission and the Ingham County Health Department to assess the effectiveness of portable air filtration (PAF) for mitigating lead dust exposures and reducing childhood blood lead levels in older housing. Specific objectives include: (1) assess reduction of lead dust exposures; (2) assess reduction of childhood blood-lead levels; and (3) develop evidence-based exposure reduction guidance for wider public use of PAF. Positive results would form part of the evidence base required to promote wide-scale PAF implementation. This is particularly important for

households that lack the resources to promptly remove lead-based paint hazards by other methods.

Michigan Technological University will be awarded $699,916 for a laboratory and field study to: (1) prescribe the most appropriate, low-cost lead-immobilization technique for contaminated soils of variable physical and chemical properties; (2) correlate standard laboratory-based measurements of the potential uptake of lead from soil following incidental ingestion with measurements made using a novel approach that uses human cell lines, which may provide more realistic risk numbers; and (3) predict blood lead levels and model human health risk for exposure to lead-contaminated soils with and without chemical amendments. This new knowledge is intended to help practitioners select site-appropriate, ecologically, and economically sustainable lead immobilization methods for remediation of residential soils.

New York

The Research Foundation for SUNY on behalf of the University at Buffalo will be awarded $659,499 to partner with the City of Buffalo and Grassroot Gardens of Western New York, a community gardening organization, to test the efficacy of dried mycelium - the root structure of mushrooms - to remove lead from soils in Buffalo. The study aims to: 1) investigate the mechanisms through which mycelium removes lead from soil; 2) test the efficacy of soil remediation via dried mycelium at varying soil pH levels and lead concentrations; 3) deliver educational programming on the risks of lead-contaminated soils and risk reduction; and 4) conduct a policy analysis and explore end-user perceptions and acceptability to inform future implementation efforts. If successful, this project will assess the feasibility of using this approach to remove lead from contaminated soils and broaden the range of educational materials on risks related to contaminated soils.

HUD AWARDS $9.4 MILLION IN RESEARCH GRANTS TO REDUCE HOUSING-RELATED HEALTH HAZARDS

Funding to improve methods to identify and control key residential hazards

FOR RELEASE October 26, 2020

WASHINGTON - The U.S. Department of Housing and Urban Development (HUD) today awarded $9.4 million to 13 universities and public health organizations to improve our understanding of the longer term impact of housing interventions targeting lead and other residential hazards and improve methods to identify and control residential health hazards such as pests, injury hazards, and asthma triggers. These grants are particularly important to improve our ability to protect vulnerable populations, such as children and seniors, from exposure to these hazards. Read a complete project-by-project summary of the programs awarded grants today.

“We remain committed to improving the health and wellbeing of all Americans, especially children, by creating safer and healthier homes,” said HUD Secretary Ben Carson. “This research will inform HUD and our partners in our efforts to protect families and eliminate housing-related health and safety hazards.”

“It’s critical that we continue supporting research to develop and improve methods to create housing that supports the health of residents,” said Michelle Miller, Acting Director of the Office of Lead Hazard Control and Healthy Homes. “We know that substandard housing contributes to injury and illness, which is entirely preventable.”

HUD's Office of Lead Hazard Control and Healthy Homes promotes state and local efforts to eliminate dangerous lead-paint and other housing-related health and safety hazards from lower income homes, stimulate private sector investment in lead hazard control, support cutting-edge research on methods for assessing and controlling housing-related health and safety hazards, and educate the public about the dangers of hazards in the home. The grants are being offered through HUD's Lead and Healthy Homes Technical Studies Grant Programs.

2020 Lead and Healthy Homes Technical Studies Grant Awards

Arizona

Sonora Environmental Research Institute, Inc. will be awarded $624,250 to determine the effectiveness and longevity of healthy homes interventions and education for reducing unintentional injuries and fires resulting from housing-related hazards, and determining the barriers and incentives affecting future use of these cost-effective strategies. It builds on a previously awarded HUD Healthy Homes Production grant, which targeted a population of 2,985 low income households and provided home assessment utilizing the SERI Heathy Homes Rating System app followed by installation of smoke alarms and distribution of an educational packet highlighting methods to make residents' homes healthier. A subset of homes also received physical interventions for unintentional injuries and fires.

Contact Person/Authorizing Official: Ann Marie Wolf; annmarie@seriaz.org

Indiana

Indiana University, partnering with three HUD Lead Hazard Control Program grantees: the City of Greensboro, NC**;** City of Fort Wayne, IN**;** the Indiana Housing and Community Development Authority, and RTI International, will be awarded $449,995 to use existing databases to define a "lead exposome" – combining all of the potential contributors to lead exposure in one place and using machine learning algorithms to create predictive models. The study goals are to decrease reliance on children as a sentinel for identifying at-risk homes, increase the likelihood of preventing cognitive damage from lead exposure, and to focus spending on lead hazard control interventions where it will have the greatest effect.

Contact Person/Authorizing Official: Steven A. Martin; iuaward@iu.edu

The University of Notre Dame, partnering with Indiana University and Purdue University, Indianapolis, will be awarded $700,000 to further validate and scale-up a household lead screening kit to detect environmental lead hazards in two of Indiana's largest counties. The study's goal is to prove that their screening kit will make household lead risk assessments more cost-effective. The kit would do this by allowing health departments to target the expensive and time-consuming household lead risk assessments to homes that are most likely to contain the worst environmental lead hazards.

Contact Person/Authorizing Official: David L Ross; dross5@nd.edu

Kentucky .

University of Kentucky Research Foundation will be awarded $400,000 to evaluate resident perception of cockroach management in affordable housing, and develop and evaluate an accessible, resident centered cockroach management protocol. Researchers will develop a protocol to reduce cockroach populations in affordable housing communities by reshaping how cockroach management is implemented and sustained as well as centering control efforts on residents by placing them in a position to be champions for their own health.

Contact Person/Authorizing Official: Kim C. Carter; ospa@uky.edu

Louisiana

The Administrators of the Tulane Educational Fund will be awarded $999,019 to examine exposure to air pollution (black carbon, $PM_{2.5}$ and NO_2) in the homes of low-income adults, 60 years of age and older living in HUD subsidized housing in greater New Orleans. Personal monitoring of black carbon will also be conducted. The primary goal of the study is to assess the impact of indoor exposure to black carbon and cardiopulmonary health, with a focus on the potential effects on blood pressure and heart rate. Air pollutants chosen are those known to be combustion byproducts and thought to be predictors of adverse cardiovascular and respiratory outcomes.

Contact Person/Authorizing Official: Kathleen Kozar; elecnotf@tulane.edu

Maryland

John Hopkins University Center for Injury Research and Policy, partnering with the Green and Healthy Homes Initiative, will be awarded $999,871 to demonstrate and address the gap between what is known to work for preventing child home injuries and the uptake of those prevention approaches by high-risk families. The study team will use the CHASE Tool, developed by John Hopkins University, to assess child injury risks in low-income foster family homes, before and after implementation of evidence-based modifications, to document the time and cost burden to conduct the assessments on a large scale and the residents' willingness to accept the modifications.

Contact Person/Authorizing Official: Alexandra Albinak; jhura@jhu.edu

Massachusetts

Silent Spring Institute, Inc will be partnering with the City of Rochester (a HUD Lead Hazard Control Program grantee) to evaluate the effectiveness of integrating resident engagement in homes participating in lead and healthy homes rehab programs to sustainably improve housing conditions and to evaluate the combined influence of housing rehabilitation and resident engagement on exposures to semi-volatile organic compounds (SVOCs), lead, and allergens. Researcher will evaluate the impact of the LHC program on levels of SVOCs, which are often found in house dust, and compare the impact on residential behaviors and measured lead, allergen, and SVOC dust levels in homes also taking part in an enhanced version of the New York's Healthy Neighborhood Program (a low intensity healthy homes education and referral program).

Contact Person/Authorizing Official: Diane Czwakiel; czwakiel@silentspring.org

Michigan

Wayne State University will be awarded $699,171 to partner with the Michigan Department of Health and Human Services, CLEARCorps Detroit, and the Detroit Health Department to study the cost-effectiveness of protecting children from lead exposure through improved temporary emergency relocations, and new permanent voluntary relocations. The objective of this study is first to establish whether the policies are effective in reducing blood lead levels in children, and then to compare the costs of relocation to the costs of current approaches.

Contact Person/Authorizing Official: Sophia Johnson-Parks; ah7195@wayne.edu

Missouri

The University of Missouri – Kansas City (UMKC) will be awarded $699,997 to partner with The Kansas City Health Department Childhood Lead Poisoning Prevention Program and Children's Mercy Kansas City Environmental Health Program to study how different interventions have made housing lead safe and if this results in fewer lead poisoned children among those who move into a home after remediation is completed. UMKC will also develop a Housing Based Lead Risk Index to cost effectively target homes with higher interior lead dust levels. The goal is to develop a primary prevention approach based on exterior housing observations as well as neighborhood level social determinants of health.

Contact Person/Authorizing Official: Yusheng (Chris) Liu, PhD; ORS@umkc.edu

Nevada

Board of Regents, NSHE, obo University of Nevada, Las Vegas (UNLV) will be awarded $530,891 to study the knowledge gap surrounding the extent of potential hazards associated with the lead content of commercially available ceramic tile. Characterization of the potential lead hazards of ceramic tiles could inform policies and practice concerning the extent of lead dust hazards originating from tile, lead utilized in the manufacture of tile and glazes, and guidance regarding the handling, installation, and demolition of tile during home renovations.

Contact Person/Authorizing Official: Lori M. Ciccone; osp@unlv.edu

New Jersey

Rutgers, The State University of New Jersey will be awarded $641,756 to evaluate the cost-effectiveness of integrated house mouse management programs by comparing the cost and effectiveness of three different mouse treatment programs in multifamily apartment buildings, the effect of integrated house mouse control programs on mouse allergen reduction in homes, and profile house mouse ectoparasites and their potential role as disease vectors by investigating the species and infestation rates of ectoparasites on house mice found in multifamily buildings.

Contact Person/Authorizing Official: Colin Coakley; cc1609@ored.rutgers.edu

Ohio

The Ohio State University will be awarded $999,884 to develop and validate a rapid, point-of-care, smartphone-based test of house dust for semiquantitative detection of inhalant allergens which commonly cause asthma symptoms. The researchers will also demonstrate usability of the app for improved real-time hazard assessment in homes of asthmatic children. They will work with their community partner, the Asthma Express program, at Nationwide Children's Hospital Homecare. This program has direct access to the community and provides follow-up education and instruction to families of pediatric patients, who suffer from severe asthma attacks, through in-home nurse visits.

Contact Person/Authorizing Official: Carolyn Vesely; vesely.4@osu.edu

Pennsylvania

Franklin & Marshall College, partnering with the Partnership for Public Health and the City of Lancaster, will be awarded $699,139 to study the long-term effectiveness of lead hazard control activities and investigate the duration of residence in a lead remediated home on children's cognitive outcomes. The study will use the 425 homes remediated in Lancaster over the past 18 years and will perform lead hazard risk assessments to determine the differences in the risk assessment findings in relation to the type of lead hazard control work and the time since remediation.

Contact Person/Authorizing Official:
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FOR RELEASE
Thursday
October 10, 2019

HUD AWARDS $8.4 MILLION TO STUDY LEAD AND OTHER HEALTH HAZARDS

WASHINGTON - The U.S. Department of Housing and Urban Development (HUD) today awarded nearly $8.4 million to seven universities and two other research institutions to improve the Department's and the public's knowledge of housing-related health and safety hazards, including the development of new methods for identifying and mitigating lead-based paint hazards that pose a particular health risk to young children.

HUD's *Lead and Healthy Homes Technical Studies Program* supports the development of new scientific techniques to assess and control a variety of home-related health risks including lead, pesticides, secondhand tobacco smoke, cockroach allergens, and indoor air pollutants.

The overall goal of the *Lead Technical Studies Program* is to gain knowledge to improve the efficacy and cost-effectiveness of methods for evaluation and control of residential lead-based paint hazards, and the overall goal of the Healthy Homes Technical Studies (HHTS) program is to advance the recognition and control of priority residential health and safety hazards and more closely examine the link between housing and health.

HUD is awarding grants under these programs to the following applicants (read more about what these institutions will seek to study):

LEAD TECHNICAL STUDIES GRANT AWARDS			
State	**Recipient**	**City**	**Amount**
Illinois	The Board of Trustees of the University of Illinois	Chicago	$700,000
Maryland	QuanTech, Inc.	Rockville	$611,534
Massachusetts	Trustees of Boston University	Boston	$670,799
		TOTAL	**$1,982,333**
HEALTHY HOMES TECHNICAL STUDIES GRANT AWARDS			
State	**Recipient**	**City**	**Amount**
District of Columbia	The George Washington University	Washington	$850,000
Illinois	Illinois Institute of Technology	Chicago	$1,000,000

	The Board of Trustees of the University of Illinois	Chicago	$999,999
Massachusetts	University of Massachusetts, Lowell	Lowell	$999,999
Maryland	National Center for Healthy Housing Inc.	Columbia	$799,999
North Carolina	North Carolina State University	Raleigh	$999,295
Virginia	Virginia Polytechnic Institute and State University	Blacksburg	$756,570
		TOTAL	**$6,405,862**
		GRANT TOTAL	**$8,388,135**

October 2, 2018

HUD AWARDS $6.7 MILLION IN RESEARCH GRANTS TO REDUCE LEAD AND OTHER HOUSING-RELATED HEALTH HAZARDS

Funding to improve methods to identify and control key residential hazards

WASHINGTON - To help protect children and seniors from exposure to lead and other home health hazards, the U.S. Department of Housing and Urban Development (HUD) today awarded $6.7 million to seven universities and public health organizations to improve methods for identifying and controlling residential health risks including lead-based paint, mold, secondhand tobacco smoke, and other indoor contaminants. Read a complete project-by-project summary of the programs awarded grants today.

The grants to states and local governments, institutions of higher education are being offered through HUD's *Lead and Healthy Homes Technical Studies Grant Program*. The following is a state-by-state breakdown of the grant awards announced today:

LEAD TECHINCAL STUDIES AND HEALTHY HOMES TECHNICAL STUDIES GRANTS		
STATE	**GRANTEE**	**GRANT AMOUNT**
Maryland	National Center for Healthy Housing, Inc.	$1,246,000
Massachusetts	Massachusetts Department of Public Health	$1,000,000
	Tufts University	$779,935
	President and Fellows of Harvard College	$999,912
New York	The Trustees of Columbia University in the City of New York	$991,572
Texas	Baylor College of Medicine	$1,000,000
	The University of Texas at El Paso	$699,911
	TOTAL	**$6,718,160**

"This research will help communities create healthier home environments for families and seniors," said HUD Secretary Ben Carson. "These grants not only save money but also help to prevent injuries from lead-based paint exposure and common housing-related health hazards."

"It's critical that we continue supporting research to develop evidence-based methods that make our homes safer places to live," said Matt Ammon, Director of HUD's Office of Lead

Hazard Control and Healthy Homes. "We know that poor quality housing can contribute to injury and illness, which is entirely preventable."

HUD's Office of Lead Hazard Control and Healthy Homes promotes local efforts to eliminate dangerous lead-paint and other housing-related health and safety hazards from lower income homes, stimulate private sector investment in lead hazard control, support cutting-edge research on methods for assessing and controlling housing-related health and safety hazards, and educate the public about the dangers of hazards in the home.

2018 Lead and Healthy Homes Technical Studies Programs Grant Awards

Maryland

The National Center for Healthy Housing, Inc., partnering with Cincinnati Children's Hospital, will be awarded $650,000 to conduct a retrospective data analysis of the effectiveness of lead hazard control abatement techniques that were used in the HOME Study (previously funded by HUD and the NIH). The grantee will determine whether aggressive lead hazard control interventions, conducted in both urban and suburban households, can keep dust-lead levels sufficiently low to prevent children from developing elevated blood-lead levels. The study will also provide information about the intensity of interventions needed to achieve dust-lead clearance levels that are lower than the current federal standard.

Contact Person/Authorizing Official: Ms. Amanda Reddy 443 539 4152 areddy@nchh.org

The National Center for Healthy Housing, Inc., partnering with the Michigan Department of Health and Human Services, will be awarded $596,830 to analyze data collected by the State of Michigan's lead poisoning prevention program to characterize and assess recent lead levels in dust, soil, paint, and drinking water, while controlling for a large number of potentially confounding variables. These levels will be modeled to predict exposures using robust structural equation modeling, which has been used previously in the evaluation of HUD's Lead Hazard Control Grant program and other research. The study will provide updated information on the relative contributions of various residential lead exposure sources to children's blood-lead levels.

Contact Person/Authorizing Official: Ms. Amanda Reddy 443 539 4152 areddy@nchh.org

Massachusetts

Massachusetts Department of Public Health, partnering with the University of Massachusetts, Lowell**,** will be awarded $1,000,000 to conduct the ROAAD-X study which will provide evidence as to whether a scaled down version (fewer home visits) of an innovative Community Health Worker-led multi-component asthma home-visiting intervention with strong clinical-community linkages, has the potential to improve asthma control and healthcare utilization for older adults with asthma. The ROAAD-X study will enroll eligible participants at Lowell Community Health Center, the ROAAD pilot clinical site, and conduct an analysis of the cost effectiveness and return on investment (ROI) of the interventions. It will also seek to validate a tool created by MDPH to quantify indoor environmental asthma triggers.

Contact Person/
Authorizing Official: Ms. Eileen Sullivan 617 624 5200 Eileen.M.Sullivan@MassMail.State.ma.us

President and Fellows of Harvard College, teaming with an affordable housing provider (Beacon Communities), will be awarded $999,912 to conduct a study to optimize the impact of smoke-free residential policies in federally assisted multifamily housing using an evidence-informed implementation approach. The study will use six key implementation strategies identified in earlier research on the experiences of public housing authorities (PHA) that implemented smoke-free housing policies. The primary objective is to develop evidence-based smoke-free policy implementation strategies. It uses an established implementation science framework to guide the approach using a mixed methods approach embedded within a longitudinal design to collect and analyze outcome and implementation process data.

Contact Person/Authorizing Official: Ms. Elaine Kiley 617 432 8144 nga@hsph.harvard.edu

Tufts University, teaming with the City of Somerville (MA), will be awarded $779,935 to develop a performance-based evaluation framework specific to multifamily housing near highways that considers air quality benefits, indoor comfort, and sustainability of various HVAC and air-filtration systems. The study has two main objectives: (i) to quantitatively assess the indoor air quality benefits derived from use of high efficiency filters and optimization of ventilation system design parameters in public housing located near highways; and (ii) to develop a guidance document based on a stakeholder workshop that can be used to inform the design of HVAC systems and their operation for multi-family housing near busy roadways.

Contact Person/Authorizing Official: Ms. Nicole Tardiff 617 627 8858 Nicole.Tardiff@tufts.edu

New York

The Trustees of Columbia University in the City of New York, partnering with Ohio State University, will be awarded $991,572 to conduct a study that directly builds on a prior HUD-funded work to address critical knowledge gaps in the understanding of the determinants of fungal exposure in low-income, urban homes and the relevance of early-life domestic exposure to a specific type of commonly occurring fungi in the in children's asthma development. The study design leverages biospecimens and databases readily available from two New York City (NYC) study cohorts including a comprehensive prospective birth cohort of African-American and Hispanic children who have grown up in the northern Manhattan and the South Bronx, two communities with high burdens of poverty, asthma and reported domestic mold.

Contact Person/Authorizing Official: Ms. Elba Suarez 212 305 4187 nga@hsph.harvard.edu

Texas

Baylor College of Medicine will be awarded $1,000,000 to conduct a randomized pragmatic clinical trial to assess the efficacy of residential asthma interventions in the homes of 100 individuals with asthma aged 12 years and older who reside in one of two public housing communities owned and operated by the Houston Housing Authority. Researchers will also assess the impact of interventions on chronic rhinitis, which can also be triggered by residential exposures. Participants will be randomized into one of two treatment groups: (1) phone calls only, or (2) home visits to implement and reinforce a clinically driven multi-component trigger reduction and asthma control plan. The study will include an on-site clinic for enrollment at each complex. In addition, a community health worker will be hired and trained from each property and will be as an integral part of the research team.

Contact Person/Authorizing Official: Ms. Leticia Guerrero 713 798 1297 spo@bcm.edu

The University of Texas at El Paso will be awarded $699,911 to study the effectiveness of a neighborhood-based approach, integrating community education on child lead exposure, with household-level lead hazard detection and caregiver-assisted mitigation in preventing elevated blood-lead levels (BLLs) in children. The study will use three sets of objectives to guide the collection of data needed to test study hypotheses. The effectiveness of interventions will be determined by assessing post-intervention changes in residential lead hazards, children's BLLs, and caregivers' knowledge and perception on preventing children's lead exposure.

Contact Person/Authorizing Official: Ms. Sona Kumar 915 747 5436 orspra@utep.edu

CIR Abstracts – 2017 Lead Technical Studies NOFA Awards

Colorado

The Regents of the University of Colorado will be awarded $500,000 to conduct a national evaluation of the neighborhood benefits of lead-based paint hazard interventions using existing secondary data. Specifically, the study team will measure the impact of funding from HUD's Lead Hazard Control (LHC) programs between 1993 and 2016 on property values, neighborhood health, and economic outcomes. They will also provide a detailed analysis of the determinants of effective LHC grantee programs as measured by improvements in housing and neighborhood quality. The results directly contribute to the priority goals and objectives of HUD's Lead Technical Studies program and will provide a useful framework to use existing secondary data to monitor and evaluate the effectiveness of other LHC interventions.

Contact Person/Authorizing Official: Kathryn Snider 303-735-5581 kathryn.snider@colorado.edu

Illinois

Sinai Health Systems, Inc. will be awarded $499,987 to conduct a 3-year study with the long-term goal of reducing lead poisoning among children living in some of West and Southwest Chicago's most economically challenged communities. It will do so by generating evidence concerning the feasibility, effectiveness and cost-effectiveness of using community health workers (CHWs) to conduct proactive visual inspections in homes for LBP hazards before a child is exposed. To facilitate the identification of homes for this intervention, a University of Chicago predictive model will be used to identify homes at highest-risk for having such hazards as well as enrollment data from City of Chicago's Dept. of Public Health (CDPH) programs. During the study, Sinai Urban Health Institute will reach out to families of approximately 600 infants to attempt to enroll them into the study and complete the CHW-led visual inspection for lead-based paint hazards. When warranted, a full lead inspection and risk assessment by CDPH's licensed lead inspectors will be conducted.

Contact Person/Authorizing Official: Claude Hall, Jr. 773-257-2749 claude.hall@sinai.org

Michigan

Michigan Technological University will be awarded $492,633 to demonstrate the long-term efficacy of using vetiver grass in reducing lead in soil through in-situ studies on six residential properties in two geographically distant areas in the United States, NJ and TX, characterized by very different climate pattern and soil types. They plan to validate the biochemical mechanisms behind vetiver's lead tolerance from the Phase-I and II studies using onsite data, test the ability of vetiver grass in reducing soil erosion, and decreasing the amount of lead-laden dust generated. The study will evaluate reuse possibilities of the vetiver biomass, such as recycling as compost material, feedstock for bioethanol production, or anaerobic digestion to produce biogas In addition, the study team will engage the community through various outreach and educational activities to spread awareness of lead hazard control technologies, and develop a guidance manual for implementation of the technology (catalyzed vetiver phytoremediation).

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CIR Abstracts – 2017 Healthy Homes Technical Studies NOFA Awards

Missouri

Washington University will be awarded $665,000 to study the feasibility of translating fall prevention research on removing home hazards into an effective home hazard removal program delivered in affordable senior housing units managed by St. Andrew's Resources for Seniors System. They plan to study both the effect of the intervention in a real-world setting and the implementation strategy. The study will determine the acceptability and feasibility of delivering the home hazard removal program in low-income senior apartments and whether the home hazard removal program is effective and cost-effective in reducing the rate and post-intervention risk of falls.

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New Jersey

Rutgers, The State University of New Jersey will be awarded $360,000 to investigate patterns of pest infestation and pesticide use in low-income housing in 4 housing communities in New Jersey (Jersey City, Linden, Paterson, and Trenton) that collectively include 3,928 apartments. They will evaluate silica gel dust for bed bug control in apartments, evaluate plastic and fabric encasements for early detection and control of bed bugs, and evaluate two minimum risk bed bug treatment protocols (chemical and non-chemical) for control of bed bug infestations. It is expected that the study findings will be useful to property managers and residents by providing guidance on the most effective bed bug control tools and methods.

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New York

Health Research, Inc./New York State Dept. of Health will be awarded $435,000 to investigate an effective sampling strategy for radon testing in multi-family housings. Currently, there is significant variation in recommendations for the number of individual ground floor units in a multifamily building that should be tested for radon. The researchers will obtain and analyze over 7,000 results of completed radon measurements from 100% of ground-floor units in over 500 multifamily buildings. The data are from radon professionals located in several states. Statistical analysis of the radon measurement data will be conducted to ascertain the minimum number of measurements needed to adequately assess the radon risk at a particular (e.g., 90%) confidence limit, and calculate and compare the increased health (lung cancer) risks to occupants associated with partial (e.g., 10%; 25%) and complete (100%) testing of multifamily units.

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Ohio

University of Cincinnati will be awarded $ 670,000 to study and define more precisely the dose-response relationships between mold exposure in homes and adverse health outcomes, which can be used to support the development of health-protective guidelines for indoor mold. The proposed work involves

the analysis of data and dust samples from a prospective cohort study of asthma development, the Cincinnati Childhood Allergy and Air Pollution Study (CCAAPS), a well-defined birth cohort of high-risk children living in the Cincinnati (Ohio) and Northern Kentucky metropolitan area. The researchers will combine reanalyzed data on observed mold and quantitatively assessed mold with new microbiome data derived from archived dust samples to conduct a comprehensive analysis on the role of observed versus measured mold in the development of children's asthma.

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Virginia

Virginia Polytechnic Institute and State University will be awarded $600,000 to study the short- and long-term performance of common point-of-use filters (POUs) for removing lead from drinking water under conditions typical of high risk water systems to develop knowledge needed to better protect consumers. The study will also involve the development of evidence-based exposure reduction guidelines and outreach strategies to address weaknesses in public education, with a focus on vulnerable communities. The study involves an examination POU lead removal efficiencies when exposed to varying concentrations of soluble and particulate lead and iron, evaluation of POU efficacy for periods up to and beyond rated capacity, identification of challenges and barriers to POU use, and evaluation of pre-and post-intervention awareness and risk perceptions of lead exposure. The study is a collaboration between Virginia Tech Department of Civil and Environmental Engineering, Louisiana State University School of Public Health, Macon County Health Department (Macon County, NC), Louisiana Environmental Action Network (St. Joseph, LA), and Southern United Neighborhoods (New Orleans, LA).

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