UW EDGE Center

Interdisciplinary Center for Exposures, Diseases, Genomics and Environment

Pilot Projects, Year 29 (2024-2025)

Effects of Air Pollution on Traumatic Brain Injury, Shelly Erickson, PI, VA Puget Sound Health Care System and Division of Gerontology and Geriatric Medicine, Department of Medicine

Engaging community to overcome barriers to wildfire smoke exposure protection in early life, Catherine Karr and Christine Loftus, Co-PIs, DEOHS, School of Public Health

Determining the health and environmental impacts of a neighborhood-wide sanitation intervention in Quelimane, Mozambique, Karen Levy and Kelsey Jesser, Co-PIs, DEOHS, School of Public Health

Novel lung-on-a-chip microphysiological system for assessing adverse effects of diesel exhaust exposures, Judit Marsillach and Ed Kelly, Co-PIs, DEOHS, School of Public Health and Department of Pharmaceutics, School of Pharmacy

Pilot Projects, Year 28 (2023-24)

Characterization of volatile organic compounds (VOCs) exposure and related protein adductomic signatures to evaluate a local public health intervention in safer degreasers, Dr. Diana Ceballos/Dr. Judit Marsillach, Co-PIs, DEOHS, School of Public Health

Bioinformatic tools for assessing health risk of antimicrobial resistance within microbiomes, Dr. Erica Fuhrmeister, PI, DEOHS, School of Public Health

A Pilot Study Characterizing Traffic-Related Air Pollution Exposure and Cellular Aging in a Sample of Marginalized Mother-Child Dyads, Dr. Jonika Hash, PI, Child, Family, & Population Nursing, School of Nursing

Application Title: Spokane Extreme Heat Risk Intervention Stakeholder Synthesis Symposium, (SEHRI S3), Dr. Tania Busch Isaksen, PI, DEOHS, School of Public Health

A zebrafish quantitative genetics platform for studying gene-environment interactions, Dr. Yijie Geng, PI, DEOHS, School of Public Health

ADDRESS

Roosevelt One Building
4225 Roosevelt Way NE, Suite 100
Seattle, WA 98105-7234

CONTACT

(206) 685-5333
edgectr@uw.edu
deohs.washington.edu

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Pilot Projects, Year 27 (2022-23)

Metagenomic Approach to Decipher Mechanisms of Cadmium Neurotoxicity, Dr. Julia Cui, PI, DEOHS, School of Public Health

Single-Cell Characterization of the Testes-Immune Axis for Improved Hazard Assessment of Chemical Mixtures, Dr. Elaine Faustman, PI, DEOHS, School of Public Health

Studying individual variability in inflammatory gene expression response to wildfire exposures using a self-administered blood sampling device, Dr. Ashleigh Theberge, PI, DEOHS, Department of Chemistry

Elucidate the effects of increased usage of quaternary ammonium compound disinfectants on human microbiome during COVID-19, Dr. Libin Xu, PI, DEOHS, Department of Medical Chemistry

Pilot Projects, Year 26 (2021-22)

Community Engagement to Identify Priorities, Policies, and Scenarios for Modeling the Health Benefits of a Just Transition, Dr. Jeremy Hess, PI, DEOHS, School of Public Health

Unraveling Gut Microbiome-Mediated Alterations in Human CYP3A4 Expression and Activity, Dr. Qingcheng Mao, PI, Department of Pharmaceutics

Spatiotemporal Refinement for Environmental Circadian Misalignment, Dr. Trang VoPham, PI, Department of Epidemiology, School of Public Health

Pilot Projects, Year 25 (2020-21)

Characterization of Urban Nano-Particles, Dr. Elena Austin, PI, DEOHS, School of Public Health

Airway Morphology as an Effect Modifier of Diesel Exhaust Inhalation in a Murine Model, Dr. Robb Glenny, PI, Pathology, PI, Division of Pulmonary, Critical Care and Sleep Medicine

Characterizing perinatal neurotoxicant exposures in a dense urban informal settlement in Nairobi: A community-engaged approach to foster new Maternal Child Environmental Health research and interventions in Kenya, Dr. Catherine Karr, PI, DEOHS, School of Public Health

Pilot Projects, Year 24 (2019-20)

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Development of a 3D microphysiological model of ochratoxin A-induced nephropathy, Dr. Ed Kelly, PI, Pharmacy

Assessing the effects of common environmental toxicants on monoallelic gene expression in *Caenorhadbits elegans*, Dr. Alexander Mendenhall, PI, Pathology

Partnership to characterize PM2.5 in 5 population centers on the Yakama Nation Reservation and Evaluation of Indoor Air Cleaners, Dr. Edmund Seto, PI, DEOHS

Pilot Projects, Year 23 (2018-19)

Assessing Molecular Responses Associated with Clinical Symptoms from Low-Level Domoic Acid Exposure in Nonhuman Primates, Dr. Tom Burbacher, PI, DEOHS, UW School of Public Health

A high throughput pre-RNA sequencing pipeline to decipher the microbiome-toxicant relationship, Dr.Julia Cui, PI, DEOHS, UW School of Public Health

Using a novel 3d intestinal tissue culture system to understand impacts of cadmium modulation of host glutathione response on enteric viral infection, Dr. Scott Meschke, PI, DEOHS, UW School of Public Health

Pilot Projects, Year 22 (2017-18)

Pilot studies of the effects of dietary factors on the colon epigenome using human "miniguts," Dr. William Grady & Chris Kemp, PI, Fred Hutchinson Cancer Research Center

Conserved SUMOylation pathways in heavy metal exposure, Dr. Dana Miller, PI, Dept. of Biochemistry

High-throughput organotypic brain slice platform for evaluation of quantum dots toxicity and cellular localization, Dr. Elizabeth Nance, PI, UW School of Chemical Engineering

Multi-method characterization of exposure to α-dicarbonyls and markers of acute response, Dr. Mike Yost, PI, DEOHS, UW School of Public Health

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