

RESEARCH VOUCHER PROGRAM

University of Louisville Center for Integrative Environmental Health Science (CIEHS)

Integrated Health Science Facility Core (IHSFC)

The **UofL Center for Integrative Environmental Health Science (CIEHS)** solicits applications to support clinical and translational environmental health science (EHS) research through the CIEHS P30 Environmental Health Sciences Core Center grant. Applications are encouraged which propose to leverage pre-existing biorepositories and human subjects research facilities such as the Clinical Trials Unit (CTU) and the Kosair Charities Pediatric Clinical Research Unit (KCPCRU) as well as those needing IRB preparation assistance. Likewise, projects that support the CIEHS's overall goal, propose to access other CIEHS Cores and/or Research Interest Groups (RIGs) and are consistent with the NIEHS translational research framework will be prioritized. The IHSFC Research voucher program encourages members of all traditionally underrepresented groups to apply and is open to all eligible faculty regardless of race, color, national origin, sex, disability, or age. Applications from members of all traditionally underrepresented groups are encouraged to apply. **An individual may be the PI or co-investigator on only one award from CIEHS in any fiscal year.**

Background: The goal of the CIEHS is to develop a framework to understand the complexities of and to integrate the interactions between environmental toxicants, lifestyle factors, life stage, genetics and gender and their roles in human health and disease. The CIEHS facilitates research and training focused on: (1) exposure to industrial chemicals present in the urban and rural Kentucky environments (metals, VOCs, POPs, etc.), (2) lifestyle factors (diet, alcohol, socioeconomic stressors, obesity, etc.), and the modifications to response by life stage, genetics and gender in development of chronic adult diseases. The CIEHS is organized into three multi-disciplinary research interest groups (multi-organ toxicology, cancer, and neurodevelopmental toxicology); an Integrated Health Science Facility Core (IHSFC), a Community Engagement Core (CEC), and two facility cores (Biostatistics and Informatics Facility Core, "BIFC" and the Omics & Exposure Facility Core, "OEFc"). More information about the CIEHS may be found at <https://louisville.edu/ciehs/>. More information about NIEHS translational research framework may be found at <https://www.niehs.nih.gov/research/programs/translational/framework-details/index.cfm>.

Small, Medium and Large Research Voucher Applications will be accepted for this deadline. **For Medium Research Voucher Applications only, in response to the NIEHS Emerging Strategic Opportunities, priority for the March 14, 2023 deadline is being given to proposals focusing on the following areas.** Please note, however, that that funding of a Medium Research Voucher is not limited to these priorities.

1. **Precision Environmental Health:**

- Addresses the individual variability associated with responses to environmental exposures
- Goal is to understand individual risk to prevent disease
- Integrates Genetics, Epigenetics and Omics Data

2. **Exposomics:**

- Involves getting beyond single exposures: totality of exposures across life course
- Requires an unprecedented integrated data infrastructure

3. **Computational and Data Science:**

- Proactive planning to enable interdisciplinary, collaborative, cross-cutting strategies
- Work to ensure that grantees have access to state-of-the-art computational capabilities
- Goal is to enable exposomics, data-driven/knowledge-driven discovery, computational toxicology, microphysiological systems, precision environmental health

4. **Environmental Justice and Health Disparities:**

- Environmental factors such as air and water quality are fundamental determinants of our health and well-being. Environmental factors can lead to disease and health disparities

when the places where people live, work, learn, and play are burdened by social inequities.

5. Mechanistic and Translational Toxicology:

- Molecular mechanisms that underlie agent toxicity: how is gene expression impacted by exposures
- Data generation can be translated to human biology
- Utilizes innovative new approaches to study environmental exposures

6. Climate Change and Health:

- Direct Effects: heat-related illness; respiratory disease; heart disease; food- water-and vector-borne diseases; injury; premature death, mental health impacts, poor maternal and birth outcomes
- Indirect Effects: chemical releases into environment, changes in air, water, food quality and quantity; population displacement; interruptions to health care; Infrastructure and supply chain disruption; economic impacts – more people living in poverty.

General Information and Types of Awards:

(1) **Response to Reviewers (small) awards** for up to \$1,500 to cover the costs associated with research needed to finish out a project or address questions arising in manuscript revisions or grant resubmissions.

(2a) **New Hypothesis Expansion/Direction (medium) awards** for up to \$5,000 to cover costs associated with critical exploratory research and proof-of-concept studies needed for hypothesis generation and grant (re-) submission.

- ***It is expected that funding these EHS-centric studies will lead to NIEHS grant submissions by the PI.***

(2b) **IRB Preparation Assistance (medium) awards** for up to \$5,000 to cover costs associated with assistance in IRB preparation.

(3) **Supporting the Base (large) awards** (up to 25% total costs capped at a \$10,000 maximum) will be provided to subsidize already funded EHS research (for example NIEHS).

Review Process: Applications are submitted through the Onbase platform and then reviewed by CIEHS executive staff and IHSFC director to evaluate for (A) addressing the CIEHS goals and advancing the NIEHS mission, (B) scientific merit, and (C) feasibility of achieving stated aims and goals. Medium award voucher applications will be assigned to two independent, expert-reviewers to focus on review of scientific merit and will be scored for scientific merit on the 9-point NIH rating scale to rank for funding and provide feedback to the applicant.

Note: Awards for human studies or animal studies will not be approved if IRB or IACUC protocols are pending.

An individual may be the PI or co-investigator on only one award from CIEHS in any fiscal year. **Awardees** will be required to sign an award notice committing to the terms of the award, including required post-award reporting, citation of the grant (P30ES030283) in any publications, and **participation in a CIEHS session at the subsequent annual Research!Louisville event.**

Post-Award Administration of Voucher Awards

Reporting: Ascertaining the impact of IHSFC voucher awards on UofL EHS research is vital for gauging the success of the program. To gather necessary information needed to measure success all awardees (PIs) will be contacted 12-, 24- and 36-months post award. The goal will be to determine if and how the IHSFC funds led to support and stimulation of EHS research by CIEHS members. We will be looking to gather

information that includes but is not limited to: **(a)** listing of poster and oral presentations, **(b)** grant applications which included subsidized research results, **(c)** trainees that were directly involved with the research, **(d)** copies of the manuscripts (resubmitted/in-press/published), **(e)** grant applications (submitted/funded/renewed), **(f)** data sharing to the EHS research community and lastly a cover page addressing how the expended funds addressed the gap in the research.

To apply for a research voucher, please click on the link below:

<https://louisville.edu/ciehs/ciehs-research-vouchers/ciehs-research-voucher-application>

Program Contacts

For general information about the CIEHS IHSFC Subsidy Award Program and the application process, contact: Matt Cave, MD, Director, IHSFC, ihsfc@louisville.edu

For information related to other CIEHS Cores and RIGs, contact the individual directors:

Omics and Exposure Facility Core (OEFC) Michael Merchant, PhD
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Community Engagement Core
(CEC) Luz Huntington-Moskos,
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Biostatistics and Informatics Facility Core (BIFC)
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Multi-organ Toxicology
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Cancer RIG
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Neurodevelopmental Toxicology
RIG Greg Barnes, MD, PhD
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