

Pilot Projects Program  
Research Funding Announcement  
2022–2023

April 26, 2022

The Center for Environmental Genetics (CEG) announces the following funding opportunity through its Pilot Projects Program (PPP). We offer competitive awards in six categories to support a range of innovative, multi-disciplinary, high-risk/high-reward research efforts.

The CEG is housed in the UC College of Medicine and is funded by the National Institute for Environmental Health Sciences (NIEHS) center award P30 ES006096. Our mission is to conduct innovative, multidisciplinary research on **gene-environment interactions (GxE)** and translate discoveries to disease prevention via community empowerment, at home and around the globe. As one of the ways to achieve this mission, the CEG offers promising investigators access to use of its facilities and services cores; e.g., genomics, epigenomics, proteomics, *etc.* (See list below).

## I. Award Categories

1. **Innovator** awards for existing environmental health scientists who wish to develop research in a new direction, e.g., using a new technology/concept or establishing new collaborations. Up to 30K.
2. **New-to-EHS** awards for investigators at any level who have no prior experience in environmental sciences/environmental medicine research, but wish to venture into the field. Applicants must identify an EHS scientist as a co-investigator. Up to 30K.
3. **Affinity Group** awards for a group of multiple investigators from different disciplines submitting a highly integrated and novel transdisciplinary application. These should be new research teams. Collaboration with other NIEHS-funded EHS Core Centers is encouraged. Up to 50K.
4. **Translation and Community Engagement** awards for EHS researchers to pursue new directions in research translation and community engagement (up to 20K). The intent of proposals in this category is that the study uses study findings of a CEG investigator in translation to the community. The CEG investigator whose research is being translated should be part of the study team
5. **New Investigator Awards** for junior faculty investigators (ONLY those who have already been selected for initial salary support under the CEG Administrative Core). Up to 30K. NIAs must have a mentor \ mentor committee.
6. **Time-Sensitive Response (TSR) Awards** for CEG members with urgent but unexpected research needs. Up to 5K.

Award categories 1 through 5 are awarded once a year; TSR category awards will be made on a rolling basis.

## Review of a pilot award application will be more favorable if the proposal demonstrates:

1. Relevance to gene-environment interactions (GxE): *e.g.*, given the same environmental exposure or dose, what accounts for different responses between individuals having variants of the same gene? For population studies, well-characterized family history may be considered as the genetic component.

The CEG expects funded Pilot studies to lead to NIEHS grant applications; hence a proposal's likelihood to advance the study of gene-environment interactions is essential.

2. High-risk/high-reward (exploratory studies).
3. New directions (including something never before tried by this PI).
4. Integration of new technologies and concepts into the research.
5. Synergism that complements the existing research base of the CEG.
6. Strong potential for translation / community outreach and engagement.
7. Use of CEG facility cores, shared equipment and services: see the ITS web page at <https://med.uc.edu/depart/eh/centers/ceg/its>

## II. Eligibility

Principal investigators (PIs) must have a faculty appointment or be a senior research staff member with doctoral-level training. Postdoctoral Fellows and Graduate Assistants are not allowed to be PIs on these awards.

Proposals that do not evaluate gene x environment interaction(s) will be considered non-responsive and will not be reviewed. Exceptions may apply to the 'Translation and Community Engagement Award' category.

**“Gene”** in this context is broadly defined: *i.e.*, individual genes/gene components, gene products, genomics, functional genomics, proteomics, metabolomics, epigenomics.

**“Environment”** in this context is defined based on the language used by the NIEHS for environmentally relevant toxicants in its RFAs, as cited below, *e.g.*,

*Examples of environmentally relevant toxicants include industrial chemicals or manufacturing byproducts, metals, pesticides, herbicides, air pollutants and other inhaled toxicants, particulates or fibers, and fungal/bacterial or biologically derived toxins. Agents considered non-responsive include, but are not limited to, alcohol, drugs of abuse, pharmaceuticals, chemotherapeutic agents, radiation which is not a result of an ambient environmental exposure, and infectious or parasitic agents, except when agents are disease co-factors to an environmental toxicant exposure to produce the biological effect. Applications which focus entirely or primarily on these exposure factors will be considered nonresponsive to this announcement and will not proceed to review. However, it is appropriate to include these factors as part of research to define effects of the exposome, and these factors may be a part of applications focused on the totality of a person's environmental exposure.” [our emphasis added]*

Note that, while environmental tobacco smoke (secondhand smoke) would be a fundable topic, (direct) smoking is not. More at <https://www.niehs.nih.gov/health/topics/agents/index.cfm>

## III. Required Steps – Prior to Submission

When submitting a proposal that includes human subjects or human specimens, applicants should

be aware that an approved IRB protocol will be **required** before any award can be made. You are advised to **consult in advance** with the CEG **Integrative Health Sciences Facility Core** (IHSFC) at least 2 weeks before the proposal submission deadline. To schedule, please email IHSFC leader Jack Rubinstein, M.D., [rubinsjk@ucmail.uc.edu](mailto:rubinsjk@ucmail.uc.edu), and IHSFC co-leader Kelly Brunst, Ph.D., [brunstkj@ucmail.uc.edu](mailto:brunstkj@ucmail.uc.edu).

#### **IV. Additional Funding up to 1K for Community Engagement \ Translation**

All pilot award recipients, regardless of award category, are eligible to receive up to \$1,000 in additional funds to facilitate efforts community engagement and translation of research results. The PI \ Pilot Applicant should **consult in advance** with CEC leader Nick Newman, DO, FAAP, [nicholas.newman@cchmc.org](mailto:nicholas.newman@cchmc.org) and CEC co-leader Michelle Burbage, PhD, [burbagml@ucmail.uc.edu](mailto:burbagml@ucmail.uc.edu), to discuss community engagement & research translation plans.

A written request for these supplemental community engagement funds should be included with your application, and should include (1) a description of your plans for research translation \ community engagement and (2) budget with budget justification. 1 page maximum.

#### **V. Deadlines and Funding Information**

- Applications must be received by **5:00 pm Friday May 20, 2022**.
- The pilot project period is limited to the current grant year ending March 31, 2023 with no extensions \ carryover allowed
- Applicants for an Affinity Group award may request up to **\$50,000**. Applicants in the Innovator, New to EHS, or New Investigator Award categories may request up to **\$30,000**. Applications for Translation & Community Engagement Awards are capped at **\$20,000**. Applicants for a Time-sensitive Response Award may request up to **\$5,000**. *cf. sec I*.
- Actual award amounts, however, may vary depending on funds available. Indirect or F&A costs are not allowed. Awardees are strongly advised to spend all project funds by **February 28, 2023** but no later than **March 31, 2023**. Any unused funds, at that time, will be returned to the CEG. There is no possibility of any carryover. We typically fund 5 to 7 projects each award cycle.

#### **VI. Application Requirements**

1. NIH face page| [PHS 398 fp1](#) is **required** for CCHMC and non-UC applicants
2. CEG cover page with abstract is **required** of all applicants (adapt & follow the template below; provide all information requested) .
3. **Proposal narrative** **≤5 typed pages** (except for a 2-page limit for the Time-sensitive Response Award) using single spaced, Arial font 11, ≥ 0.5 inch margins, providing
  - a) Specific Aims and Hypothesis
  - b) Background and Significance (with relevance to your research question and hypothesis)
  - c) Approach (research methods to be used)
  - d) Relationship of the project to the GxE interaction theme of the Center.

- e) CEG Core Facilities to be used for the proposed research (*cf.* facilities list [here](#); *i.e.*, <https://med.uc.edu/depart/eh/centers/ceg/its>)
  - f) Bibliography (not included in the 5-page limit)
3. Biographical sketches of the PI and all key personnel (current NIH format)
  4. If available at the time of application, all projects that require the consent of Human Subjects or use existing data / Human Specimens or **must** provide:
    - a copy of your **IRB approval** or IRB document showing exempt from IRB review. If exempt, provide a description of the study, what human data/samples will be used, and from where they will be obtained.
    - Planned Inclusion Enrollment Report for non-exempt research (see slides 18 & 19 [here](#)).

Award dollars for successful proposals involving Human Subjects/Human Specimens cannot and will not be released until the CEG receives documentation of IRB approval and a completed questionnaire that will allow us to create a **Human Subjects Study Record in ASSIST** (*cf.* slides 7 and following [here](#)). A copy of the ASSIST questionnaire can be obtained [here](#) (PDF).

5. **Itemized budget and a written budget justification** are required. (These are not included in the page limits).  
Use of [PHS 398 face page 4](#) (fp4) is **required**.  
Budgets may NOT include faculty salaries. Budgets may NOT include publication or page charges. Budgets may NOT include travel costs to present findings.  
Budgets that include the use of CEG facility cores will be viewed favorably.  
Awardees are eligible for a subsidy for CEG core usage but the subsidy is not automatic. See ITS web page at <https://med.uc.edu/depart/eh/centers/ceg/its>. The proposed budget should be prepared without assuming a post-award matching subsidy.  
Budgets will be reviewed for accuracy and appropriateness by a CEG financial officer.
6. List of prior CEG support and products (if any), including:
  - Previously awarded CEG funds and subsequent R01 or other grant as matching funds
  - Publications, abstracts, or presentations (relevant to that PPP) supported by CEG
  - Grant applications arising from PPP data generated with the CEG support

Submit applications to the CEG coordinator Teresa Donovan at [donovata@ucmail.uc.edu](mailto:donovata@ucmail.uc.edu)

Questions regarding the application and review process may be directed to the PPP Director Dr. Jagjit Yadav ([Jagjit.Yadav@uc.edu](mailto:Jagjit.Yadav@uc.edu)) and co-leader Dr. Roman Jandarov ([jandarrn@ucmail.uc.edu](mailto:jandarrn@ucmail.uc.edu)) for scientific issues and to the CEG/PPP coordinator ([donovata@ucmail.uc.edu](mailto:donovata@ucmail.uc.edu)) for administrative issues.

## **VII. Post Award Duties**

1. Awardees are strongly advised to spend all project funds by **February 28, 2023** but no later than **March 31, 2023**. Any unused funds, at that time, will be returned to the CEG. There is no possibility of any carryover. Awardees are required to provide a draft written progress report on study outcomes and impact by **January 2, 2023**.

2. All abstracts, posters, publications, and reports emanating in whole or in part from the funded work must acknowledge the support of the Center for Environmental Genetics, *e.g.*, *Research described in this article was supported by the University of Cincinnati Center for Environmental Genetics through the NIEHS award P30ES006096.*

The **NIH Public Access Policy** applies whether work leading to a publication is supported in whole or in part by CEG funds, and whether person receiving CEG funds is primary author or co-author. Accordingly, CEG-supported authors **must**

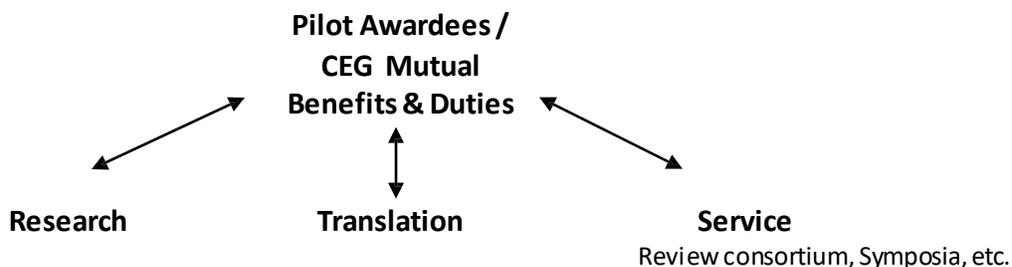
- a. acknowledge the CEG grant (NIEHS award P30ES006096)
- b. make sure that any final peer-reviewed journal manuscript that arises in whole or in part from CEG funds is submitted to PubMed Central immediately upon acceptance for publication (whether the journal publisher does it automatically, or the author makes arrangements with the publisher, or the author does so via NIH Manuscript Submission System).

Once a paper has been submitted to PubMedCentral and is **In Process** or fully **Compliant** with the NIH Public Access policy <https://publicaccess.nih.gov/> authors must associate the P30 ES006096 award to their publications via their **MyNCBI \ MyBibliography**: <https://www.ncbi.nlm.nih.gov/account>

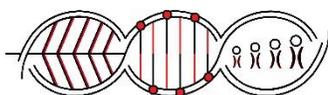
Related tutorial at [https://www.youtube.com/watch?v=JYODIOD\\_YYE](https://www.youtube.com/watch?v=JYODIOD_YYE)

3. CEG Pilot Project Symposium: Awardees are required to orally present pilot results obtained during their award period at an annual research symposium, to which all CEG members, new PPP awardees, and interested community members are invited.

4. Awardees may be asked to participate as reviewers in future cycles of the *P30 EHS Centers Pilot Review Consortium*. The Consortium includes the University of Cincinnati, Wayne State University, the University of Michigan, the University of Louisville, and Texas A & M University.



*The Center for Environmental Genetics is funded by the National Institute for Environmental Genetics, NIEHS award P30 ES006096*



Provide all details requested, on form or *via* an attachment

|   |  |
|---|--|
| <b>Project Title:</b>   |  |
| <b>Environmental component to be tested:</b><br>Examples include <i>industrial chemical(s) or manufacturing byproduct(s), metals, pesticides, herbicides, air pollutants and other inhaled toxicants, particulates or fibers, and fungal/bacterial- or biologically-derived toxins.</i> <a href="https://www.niehs.nih.gov/health/topics/agents/index.cfm">https://www.niehs.nih.gov/health/topics/agents/index.cfm</a>   |  |
| <b>Genetic/Genomic component to be tested:</b>  |  |
| <b>CEG Cores to be used</b> (see list, next page):  |  |
| <b>Principal Investigator name, title, contact information:</b>   |  |
| <b>Co-investigator(s):</b>  |  |
| <b>Description of project—including <span style="color: red;">relevance to CEG mission</span>. Abstracts of funded projects will be publicly available.</b>   |  |
| <b>Evidence of institutional review and protocol approval are <span style="color: red;">required for release of funds to any successful applicant</span>.</b> Applicants are strongly advised to apply for IRB and/or IACUC approval at the time of proposal submission if the project has not yet been approved. The approval process may take several months, so the applicant’s earliest attention is needed to obtain <b>IRB/IACUC</b> approval before receiving CEG pilot project funding. <span style="color: red;"><b>Delays in providing documentation of your IRB and/or IACUC approval can significantly delay processing of awards.</b></span> |  |
| Human Subjects <input type="checkbox"/> Yes <input type="checkbox"/> No<br><i>If Yes, the following information will be REQUIRED</i><br>Name of protocol: _____<br>PI: _____<br>IRB approval number: _____<br>Last approval Date: _____<br>Expiration Date: _____   | Animal Subjects <input type="checkbox"/> Yes <input type="checkbox"/> No<br><i>If Yes, the following information will be REQUIRED</i><br>Name of protocol: _____<br>PI: _____<br>IACUC approval number: _____<br>Last approval Date: _____<br>Expiration Date: _____ |

|  |
|--|
| <b>Total budget requested:</b>                                       |
| <b>Applicant Signature and Date:</b>                                 |
| <b>Department / Unit Chair Approval Signature and Date required:</b> |

**Please indicate if this proposal is**

- |                   |   |
|-------------------|---|
| 1) Innovator      | 4) Translation and Community Engagement     |
| 2) New to EHS     | 5) New Investigator Award (limited to NIAs) |
| 3) Affinity Group | 6) Time-Sensitive Response Award            |

**Category for this proposal = \_\_\_\_**

**Please indicate research type** (SRS required data field, select only 1)

- Basic research
- Applied research
- Experimental research
- Not research

### **CEG Facilities and Services (F&S) Cores**

**Integrative Technologies Support (ITS) Core:** Ying Xia, PhD, Director; Ranjan Deka PhD, co-leader

- Genomics and Epigenomics Sequencing Core (UC) (Xiang Zhang, PhD)
- Inhalation Core (UC) (Jennifer Flurry)
- Transgenic Animal and Genome Editing Core (CCHMC) (Yueh-Chiang Hu, PhD)
- Proteomics Core (UC) (Ken Greis, PhD)
- NMR-based Metabolomics Core (CCHMC) (Lindsey Romick-Rosendale, PhD)
- Animal Behavioral Core (CCHMC) (Charles V. Vorhees, PhD)
- Fernald Community Cohort resources (UC) (Susan Pinney, PhD, FACE, Principal Investigator)
- Pluripotent Stem Cell Facility (CCHMC) (Chris Mayhew PhD)
- Metallomics Core (UC)

**Shared Equipment** (see [ITS web page](#))

- Flow-cytometry (UC) (Shouxiong Huang, PhD)
- ELISPOT Analyzer
- Confocal Microscopy (UC) (Pheruza Tarapore, PhD)
- Versatile Imaging Systems
- Single Cell Sequencing

**Bioinformatics Support Core:** Mario Medvedovic, PhD, Director (Jarek Meller, PhD, co-leader)

**Integrative Health Sciences:** Jack Rubinstein, MD, Director (Kelly Brunst, PhD, co-leader)

**Community Engagement Core:** Nick Newman, DO, MS, FAAP (Michelle Burbage, PhD, co-leader)

<https://med.uc.edu/depart/eh/centers/ceg/pilot-project-program>