

ANNOUNCEMENT
MICHIGAN'S UNIVERSITY RESEARCH CORRIDOR (URC)
FUNDING OPPORTUNITY IN
ENVIRONMENTAL HEALTH SCIENCE

Letters of Intent: Due by 5:00 p.m., October 11, 2010

Invited Full Proposals: Due by 5:00 p.m., December 20, 2010

Executive Summary:

Michigan State University, the University of Michigan, and Wayne State University announce a funding opportunity of up to \$900,000 for a maximum period of three years for full-time faculty in the above-listed URC institutions, focused on new research leading to transformative outcomes in Environmental Health Science. The URC expects to fund two to three projects with a total of up to \$300,000 available each year, starting June 1st, 2011.

The National Institute of Environmental Health Sciences (NIEHS) describes environmental health science as the understanding of how the environment influences the development and progression of human disease. Exposures to many substances, such as pollutants, chemicals, allergens, and natural toxins, all originate from the environment and can have a detrimental effect on health. Diet and lifestyle can interact with these environmental factors and increase or decrease their effects on health. The goal of environmental health scientists is to elucidate the complex relationship between environmental risk factors and human biology within affected individuals and populations, and to use this knowledge to prevent illness, reduce disease and promote health.

The definition of Environmental Health Science has evolved, moving from a traditional science base of single investigators with a clear hypothesis to integrated research teams addressing the complex hypotheses associated with the interplay of environmental factors with many other factors (e.g., genetics, lifestyle, age, sex) on disease incidence and prognosis.

Broadly, environmental health scientists study how an environmental agent affects molecular targets, cellular function, tissue function and organism survival, related to a continuum of biological complexity that ultimately informs us about the etiology, pathogenesis, and distribution of disease. Scientific contributions from epidemiology, toxicology, molecular and cellular biology, bioinformatics, biomedical/engineering, clinical medicine and many other fields will need to be coordinated and integrated.

In addition, environmental health scientists seek to understand the excess burden of disease found in minority populations or socioeconomically disadvantaged populations and in developing tools and strategies that will prove effective for reducing health disparities. In addition to scientists, community

groups are key partners in identifying environmental issues and diseases of concern, as are regulatory agencies, academia and industry.

The Environmental Protection Agency (EPA) is interested in environmental health science as it relates to climate change, air quality, chemicals in the environment and in humans, cleaning up communities, water quality and working with communities to improve the above conditions.

It is in the above areas of investigation that the URC is interested in funding scientific investigation among URC collaborators that is innovative, collaborative and feasible.

Background:

In 2006 the presidents of Michigan State University, the University of Michigan and Wayne State University founded the University Research Corridor (URC) to accelerate economic growth in the State by educating students, supporting innovation, and encouraging the transfer of technology to the private sector. Michigan's University Research Corridor was envisioned to work in partnership with organizations across the State in creating a vibrant Michigan economy. This partnership leverages the intellectual capital of its three public research universities, works proactively to attract the knowledge economy businesses that can utilize the research activity that feeds new enterprise, educates the workforce and plants the seeds for the new industries of tomorrow.

The URC is undertaking seed sponsorship of environmental health science research among faculties of the three partner universities to better position our researchers for national competitiveness, as well as to help influence the outcomes of both state and national environmental health policy decisions.

Examples include:

- Epidemiological studies of exposures in the environment (including ingestion) and their contribution to disease and disease outcomes.
- Involuntary exposure (such as environmental exposure to smoke or other xenobiotic substances).
- Multi and inter-disciplinary studies that build methodology, resources and infrastructure, such as in sampling air, water, food and other components of the environment or developing human biomarkers of exposure.
- Collaborations using basic science techniques (e.g., epigenomics, biomarkers) or employing a systems and/or modeling approach to understanding environmental health impact/outcomes.
- The use of the newborn blood spot biorepository in relationship to environmental health research. (If you have questions on how to obtain

permission to use newborn blood spots, please contact Nancy Christ, nchrist@med.wayne.edu, 577-0551.)

What are the terms of this RFP?

1. Funding period/amount: Up to \$300,000 will be available each year for a period of three years. It is expected that two to three awards will be made. There will be no funds allocated for facility and administrative costs or indirect costs.
2. Eligible Principal Investigators are full-time faculty at the URC institutions: MSU, UM, WSU.
3. Preference will be given to projects with excellent potential for innovation and feasibility.
4. **Proposals must span two or more URC institutions.** In addition, the URC welcomes participation by other institutions and industries that have unique expertise required to successfully complete the scientific investigation proposed.
5. **A two-step process will be used, starting with the submission of a Letter of Intent. Only those projects invited to submit a full proposal may do so.** No institutional endorsement is required for the submission of an LOI (unless your institutional policy explicitly requires this). Investigators invited to submit a full proposal should follow institutional policies for submitting an *external* grant to a foundation or non-profit organization when they submit the full proposal.
6. If human or animal subjects are proposed, funding will not be released until there is evidence of IRB approval from the institution(s) that will be the site(s) of research performance.

Key Dates:

A four-page letter of intent (LOI) is due by 5:00 p.m., October 11 (Monday), 2010.

Principal Investigators will be notified by November 1 if they are invited to submit a full proposal. The deadline for the full proposal is 5:00 p.m., December 20 (Monday), 2010.

Proposal review will take place between January 1, 2011 and early April, 2011.

The anticipated start date for funding is June 1, 2011.

Funding Amount, Funding Period, and Approved Uses of Funding:

The URC has up to \$900,000 in research funding to support two or more projects to allow URC faculty to develop innovative Environmental Health Science research projects.

Funding Period: Up to 3 years, starting on or around June 1, 2011. Proposals less than 3 years must modify the funding proposal request to match the \$300,000 available per year.

No indirect costs will be allowed.

Use of Funds:

1. The budget may not include salary to offset institutional general fund salary support.
2. Funds may be used for materials, supplies, research assistant or technician salaries.
3. Personnel salaries (except consultants) must stay within URC institutions.
4. Facility/special assay fees at non-URC institutions are allowed if the necessary technology does not already exist within one of the three participating universities.
5. You may request funding for equipment (definition: \$5000 or more), for example if you measure environmental exposures and require specialized instruments to make these measurements. Note: computers costing <\$5000 and software fees are allowed.

Letter of Intent Eligibility Requirements:

Eligible applicants are full-time (9 or 12 month) faculty at a URC institution.

Proposals must span two or more URC institutions and must be multi-disciplinary in nature. Therefore, proposals with multiple PIs and/or co-PIs are encouraged.

Application Processes:

1. Submit a **Letter of Intent** (following the guidelines below on font, margin size and lines per inch) that is no more than **four (4)** pages in length:
 - The goal of the project and research aims.
 - Synopsis of the basic hypotheses and scientific approaches and methods to test the hypotheses.
 - How the research addresses an important environmental health problem in an innovative way, and moves toward closing gaps in knowledge or technology, or improving clinical practice.
 - **Plan for future external funding.**
 - Names of participants, a summary of their expertise, and evidence of existing collaboration.
 - Estimate of total budget and expected use of funding – one paragraph.

- The LOI should not include any confidential or proprietary information. If any proprietary information is included, the pertinent section(s) should be marked “confidential”.
 - Append two-page biosketches for the PI(s), co-PI(s) and key personnel, using the current NIH format. The biosketches are not counted as part of the four page limitation.
 - Include within the biosketches current and pending internal and external funding for each investigator included in the proposal.
 - You may submit a one-page cover letter with your LOI that will not be counted toward the four page limit.
2. LOIs will be reviewed by a URC Steering Committee to determine relevance. The Steering Committee will select those proposals that will be invited for full application. In case of overlap among proposals, the Steering Committee may suggest collaboration and ask applicants to identify a lead investigator.
 3. **Full applications** should be submitted by invitation only. Invitees will be provided with the information required to submit a full proposal in November 1, 2010. The deadline for the full proposal is 5:00 p.m., December 20, 2010.

Formatting Requirements:

Font

Use an Arial, Helvetica, Palatino Linotype, or Georgia typeface, a black font color, and a font size of 11 points or larger. (A Symbol font may be used to insert Greek letters or special characters; the font size requirement still applies.)

Type density, including characters and spaces, must be no more than 15 characters per inch.

Type may be no more than six lines per inch.

Paper Size and Page Margins

Use *standard paper size (8 ½" x 11)*.

Use at least one-half inch margins (top, bottom, left, and right) for all pages.

Figures, Graphs, Diagrams, Charts, Tables, Figure Legends, and Footnotes

You may use a smaller type size but it must be in a black font color, readily legible, and follow the font typeface requirement. Color can be used in figures; however, all text must be in a black font color, clear and legible.

Review Criteria:

Overall Impact: Is it likely the project will exert a sustained, powerful influence on the research in the field, or is it likely that the project will lead to this?

Significance: Does the project address an important problem or a critical barrier to progress, or is this a project that will lead to addressing these? If the aims of the project are achieved, how will scientific knowledge, technical capacity and/or clinical practice be improved?

Investigator(s): Are the PI and collaborators well suited and do they have the appropriate experience and training? Do established investigators demonstrate an ongoing record of accomplishments that have advanced their field? Do the investigators have complementary and integrated expertise? Do the investigators have the multi-disciplinary breadth in order to solve the environmental health problem identified?

Innovation: Does the application challenge and seek to shift current research paradigms by utilizing novel theoretical concepts, approaches or methodologies, instrumentation or intervention? Does the project make headway in leading to these novel concepts and approaches? Are the concepts, approaches or methodologies, instrumentation or interventions novel to one field of research or novel in a broad sense? Is a refinement, improvement or new application of theoretical concepts, approaches or methodologies, instrumentation or interventions proposed?

Approach: Are the overall strategy, methodology and analyses well-reasoned and appropriate to accomplish the specific aims of the project? Are potential problems, alternative strategies and benchmarks for success presented? Is the proposed budget realistic in amounts and categories?

Environment: Will the scientific environment in which the work will be done contribute to the probability of success? Are the institutional support, equipment and other physical resources available to the investigators adequate for the project proposed? Will the project benefit from the collaborative arrangements?

Additional Information Regarding Submission of the LOI:

Letters of Intent should be submitted electronically to the URC at urc@urcmich.org in a single PDF file by 5:00 p.m. on Monday, October 11, 2010.

Please direct any questions to Vince Nystrom (vincenystrom@urcmich.org)