MOUNTAIN & PLAINS ERC

A NIOSH Education and Research Center for Occupational & Environmental Health & Safety

Request for Proposal
2012-2013

NIOSH Mountain and Plains Education and Research Center

Pilot Projects in Occupational and Environmental Health and Safety

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I. Overview of the Pilot Project Program

In accordance with its mission, the National Institute for Occupational Safety and Health (NIOSH) Mountain and Plains Education and Research Center (MAP ERC) offers grant funding to support projects in occupational and environmental safety and health (OESH). There are two types of OESH projects that the MAP ERC supports through this grant program – scientific research projects and research-to-practice (R2P) projects. The long-term goals of this grant program are to improve health and safety and reduce risk in the mountain & plains region. Investigators from minority and underrepresented populations are strongly encouraged to apply.

Up to 9 projects will be funded in this cycle at a level up to $20,000 per year for 1 year, or at a level up to $10,000 per year for 2 years (including indirect costs). Of the total number, funding will be allocated to support up to 6 *research* pilot projects and up to 3 *research-to-practice (R2P)* pilot projects in OESH. The requirements and criteria for each type of project (research projects and R2P projects) are described below. Following the description of each project type are directions on how to apply for a grant.

II. Research Pilot Projects

Pilot research grants enable investigators to establish preliminary success and experience in occupational and environmental health research, meanwhile increasing the likelihood of future funding. Previous grantees have contributed to the MAP ERC mission with research on the following topics:

- Development of a GIS accident risk map for truck drivers
- Musculoskeletal disorders in Dairy Parlor Workers
- Childhood asthma and risk factors in a Latino population
- Indoor air quality
- Methods for measuring lung deposition of aerosols
- A metabolomic approach to assessing asbestos related cancer risk

Any areas of research related to occupational and environmental health and safety will be considered. Examples of OEHS disciplines include occupational medicine, occupational health nursing, industrial hygiene, occupational and environmental safety, ergonomics, engineering, toxicology, occupational and environmental epidemiology, health physics, and occupational health psychology.

A. Applicant Eligibility

Pilot research grants in occupational and environmental safety and health (OESH) will be awarded to investigators who fit into one of two categories. The examples listed in each of the following categories are not meant to be comprehensive. Applicants are eligible if they fit into the following two categories:

1. OESH investigators who are new to the research field in general
    a. Junior faculty members with research interests in occupational and environmental health and safety
    b. Graduate research trainees, occupational medicine residents, or postdoctoral fellows in an occupational and environmental health and safety related discipline
2. Investigators who have done research in a related discipline AND who have an interest in developing a future in an OESH discipline.
    a. Academic faculty members of any rank who are new to the field of occupational and environmental health and safety research, but who have experience doing high-quality research in a related discipline (e.g. public health, engineering, genetics, medicine, health economics, etc.)
    b. Researchers in government agencies, community organizations and private companies who can demonstrate themselves to be capable of doing high-quality research independently and without assistance of the Mountain & Plains ERC

B. Evaluation Criteria

Review committee members will provide an overall impact/priority score to reflect their assessment of the likelihood for the project to exert a sustained, powerful influence on the research field(s) involved, in consideration of the following review criteria:

1. *Significance:*
    - Does the research address an important problem or critical barrier to progress in the field of OESH research?
    - Does the research address an important problem in the MAP ERC region in occupational and environmental safety and health?
    - If the aims are achieved, how will scientific knowledge, technical capability and/or clinical practice be advanced?
    - How will successful completion of the aims change the concepts, methods, technologies, treatments, services or preventive interventions that drive this field?

2. *Investigator(s):*
    - Are the PD/PIs, collaborators, and other researchers well-suited to the project?
    - If *early-stage* or *new* investigators, do they have appropriate experience and training? Do they have suitable mentors?
    - If *established* investigators, are they new to the field of OESH research?
    - If the project is collaborative or multi-PD/PI, do the investigators have complementary and integrated expertise; are their leadership approach, governance and organizational structure appropriate for the project?

3. *Innovation:*
    - Does the application challenge and/or seek to shift current research or clinical practice paradigms?
    - Does the research project involve novel concepts, approaches, methods, instrumentation or interventions?
    - Are the concepts, approaches, methods, instrumentation and/or interventions novel to OESH or novel in a broad sense?
    - Does the application refine or improve existing theoretical concepts, approaches, methods, instrumentation or interventions?

4. *Approach:*
    - Are the overall strategy, conceptual framework, design (including composition of study population), methods, and analyses adequately developed, well-integrated, well-reasoned and appropriate to the aims of the project?
    - Does the study involve multiple stakeholders (employees, employers, and academia)?

- Is there interdisciplinary interaction or potential? Does the proposal include graduate students or others who will benefit from training in research methods in occupational and environmental health and safety?
- Does the applicant acknowledge potential problem areas and consider alternative tactics?

5. *Environment:*
    - Does the environment in which the work will be performed contribute to the probability of success?
    - Are the institutional support, equipment and other physical resources available to the investigators adequate for the project proposed?
    - Can the project be accomplished in the timeline presented?
    - Will the project benefit from unique features of the scientific environment, subject populations or collaborative arrangements?
    - Does the proposed project increase the institution's ability to conduct OESH research and contribute to regional needs?

6. *Additional Criteria:*
    - Does the research project have the potential of obtaining pilot data that may increase the probability of developing fundable larger grants or contracts in the future?
    - Is the budget appropriate to complete the scope of the work proposed?

III. Research to Practice (R2P) Pilot Projects

A. What is "Research to Practice"?

The National Institute for Occupational Safety and Health (NIOSH) is the federal organization that supports the Mountain & Plains ERC. Through its "Research to Practice (R2P) Initiative" NIOSH emphasizes the importance of integrating new research into "the real world" in order to improve worker and community health. As stated on NIOSH's website:

"The goal of R2P is to reduce illness and injury by increasing the use of NIOSH-generated knowledge, interventions, and technologies."

According to NIOSH, "translating" knowledge, interventions and technologies into workplaces and communities requires attention to six related steps:

- ***Prioritize:*** Address the most important occupational and environmental health and safety issues.
- ***Partner:*** Work together with both internal and external partners to encourage adoption and use of research findings.
- ***Target:*** Adapt research results into information products tailored to the target audience.
- ***Translate:*** Transfer and translate research findings, technologies and information into prevention practices and procedures.
- ***Disseminate:*** Use communication science to guide the movement of research into workplaces and communities
- ***Evaluate:*** Build data collection into each program to determine effectiveness in preventing workplace injury and illness

You can learn more about the R2P initiative on the NIOSH website (http://www.cdc.gov/niosh). Applicants to the R2P pilot project program are strongly encouraged to identify NIOSH-generated knowledge, interventions and technologies to serve as the bases of their applications. Examples of NIOSH-generated knowledge, interventions and technologies that could qualify for a R2P pilot project can be found on the following webpages:

- http://www.cdc.gov/niosh/docs/impact/
- http://www.cdc.gov/niosh/pubs/workplace_date_desc_nopubnumbers.html
- http://www.cdc.gov/niosh/database.html
- http://www.cdc.gov/niosh/docs/video/
- http://www.cdc.gov/niosh/pubs/all_date_desc_nopubnumbers.html

B. Applicant Eligibility

To apply for a R2P pilot project, applicants must include with their applications signed letters from two participating partners. The partners must include at least one eligible **research partner** and at least one eligible **community partner**.

1) Every R2P project must include at least one **Research Partner** who meets

one of the three following descriptions:

a. A faculty member of any rank with an interest in OESH
b. A graduate student, medical resident or postdoctoral fellow in an OESH-related discipline
    i. Students, residents and fellows must demonstrate in their applications that they have adequate faculty supervision
c. An OESH professional in a government agency, community organization or private company who can demonstrate herself/himself to be capable of leading high-quality research-to-practice activities independently and without assistance of the Mountain & Plains ERC

2) Every R2P project must include at least one **Community Partner** who meets one of the following descriptions:
    a. For-profit Businesses
    b. Labor unions
    c. Not-for-profit organizations with a commitment to workplace safety, public health, disease and injury prevention and/or sustainable community development
    d. Public health professionals located throughout the region with little or no experience in OESH

C. Evaluation Criteria

Review committee members will provide an overall score for the project. The score will reflect the reviewers' assessment of the project's potential to exert a sustained, powerful influence on worker health in the region, in consideration of the following review criteria:

1) **Prioritize:** Does the R2P project address an important OESH problem in the region?
    - Does the project address one of the MAP ERC's R2P Priorities?
    - If not, does the applicant justify the importance of the project National Occupational Research Agenda (http://www.cdc.gov/niosh/nora/), an Occupational Health Indicator Report and/or some other criteria?
2) **Partner:** Is it reasonable to expect that the research partner(s) and community partner(s) will effectively encourage the adoption and use of research findings?
    - Are the applicants qualified to implement the project? Do they have appropriate experience and training? If not, do they have suitable mentors?
    - Have the research partner(s) and community partner(s) submitted letters that indicate their commitment to the project?
    - Has there been an appropriate amount of input from both parties in the development of the proposal?
3) **Target:** Have the applicants adequately considered who the target audience is? If so, have they tailored their approach to meet the needs of their target audience?
    - Is the target audience clearly defined?

- Are the ways in which the applicant(s) have tailored their approach to the target audience appropriate and sufficient?

4) **Translate:** Will the project transfer and/or translate research findings, technologies and information into prevention practices and procedures?
    - Is the project based off of sound OESH research? Was it supported by NIOSH?
    - Does the proposal adequately describe how research findings, technologies and information will be translated/transferred into prevention practices and/or procedures?
5) **Disseminate:** Have the applicants considered how their project might reach other workplaces and communities?
    - Does the application outline future plans for the project?
    - Have the applicants developed a plan that is based on a theory (e.g. the diffusion of innovations)?
6) **Evaluate:** Have the applicants developed an evaluation so that they (or someone else) can determine its effectiveness in achieving its goals? Its effectiveness in preventing injury and illness?
    - Does the applicant acknowledge potential problem areas and consider alternative tactics?
    - Can the project be accomplished in the timeline presented?
    - Is the budget appropriate to complete the scope of the work proposed?

IV. Application Instructions

A. Disqualifying Characteristics

In addition to assessing the strengths and weaknesses of applications according to the criteria listed above, the Review Committee reserves the right to **withdraw** an application from consideration if:

- The application is incomplete
- The application is submitted after the deadline
- The applicant does not follow the application instructions outlined below
- The project aims and objectives do not relate to the mission and goals of the MAP ERC
- The application does not clearly relate to OESH
- A member of the review committee has specialized knowledge suggesting that a given project would be of little merit
- The application refers to participating organizations or collaborators that have not submitted letters of support for the grant

B. Important Dates

- Application deadline: **May 1, 2012**.
- Letters confirming the funding status of your project will be sent by **June 1, 2012**
- Funding will be provided from **July 1, 2012** through **June 30, 2013**
  - Note: If you requested a two-year project, the second year of funding will be awarded following receipt of a satisfactory one-year progress report. No funds will be disbursed without proof of Human Subjects (or Animal Care) Institutional Review Board approval (if applicable).

C. Application Forms

Please submit the following PHS398 forms (Revised 6/2009), which can be found at: http://grants.nih.gov/grants/funding/phs398/phs398.html

1) Face Page (PHS398 Form Page 1)
   Note: if you are currently at University of Colorado Denver, this application does not require internal routing for Pre-Award signature
2) Abstract (PHS398 Form Page 2)
3) Detailed Budget and Budget Justification including travel to Fort Collins, Colorado to present the results at an annual research day (PHS398 Form Pages 4 and 5)

Your application should also include the following:

4) A short biographical sketch or resume for each person involved in the project (2 page maximum for each person)
5) A proposal outlining the project. The proposal should be no longer than 5 pages (single-spaced, 12point font, 1-inch margins) and it should include:

a. Project overview, introduction
b. Specific Aims and Objectives including, where appropriate, a hypothesis or research question
c. Background and Significance
d. Project Design and Methods
    i. Target Population
    ii. Methods
    iii. Data collection methods and plan
    iv. Data analysis methods and plan
    v. Expected results and implications of the project
e. Future Directions
f. Timetable

6) References
7) (Where appropriate) IRB approval or copy of submitted application and NIH Certification. Projects involving human subjects are required to obtain IRB approval. Alternatively, a copy of animal care committee approval is required if animal research is being proposed.
8) Letter of Support from a mentor or faculty sponsor is required for all students. This letter should indicate the student investigator's ability to complete the proposed study in the timeline given, the student investigator's potential as a researcher and the potential for future funding. Any co-investigators/collaborators must provide a letter(s) of support which should indicate their agreement to collaborate and what will be their role(s) in the project.
9) Other Letters of Support: applications requiring extensive data analysis should either include a statistician co-investigator on their research team or the applicant should provide a letter of support from someone qualified to conduct or give guidance on the proposed analysis.

D. Submission Process

Submit your application electronically (Word or PDF) to:Angela.Wagstaff@ucdenver.edu by **May 1, 2012**.

E. Review Committee

Complete applications will be evaluated by a review panel. The review panel consists of 4-6 members representing institutions collaborating with the MAP ERC: University of Colorado Denver, Denver Health and Hospital Authority, Colorado State University, National Jewish Health, and University of New Mexico Health Sciences Center. At least two members of the review panel will review each proposal. Meritorious applications will be assigned a priority score based on the applicable criteria (see evaluation criteria above).

F. Awards

1) Pilot project funds are rewarded on a competitive basis.
2) The budget period covers a one or two-year period

3) The maximum award is $20,000 for one year including indirect costs, or $10,000 per year for two years, including indirect costs (two year award not to exceed $20,000 total).
4) Grantees cannot receive more than a cumulative total of 2 pilot research or R2P grants as a Project Investigator.
5) Carryover of remaining funds beyond June 30, 2013 may be allowed with prior approval, if necessary for the completion of the project and satisfactory progress has been made. Carryover requests must be submitted via email to Sara.Higgins@ucdenver.edu no later than July 1, 2013 and should include estimated unobligated balance and a short justification.
6) Allowable expenses include all relevant project expenses including:
    - Support personnel including salary (limited to 5% of a 12 month equivalent salary plus fringe benefits) and tuition support for graduate students.
    - Supplies and small specialized equipment.
    - Domestic travel necessary to conduct the research and to scientific meetings to present results.
    - Indirect costs up to 8% of total direct costs excluding tuition and fees
7) Awards will be announced in June 2012.

G. Progress Report

A brief written interim report is due 3 months prior to the end of the proposed budget period. This report should indicate the progress of the study including preliminary results and any problems encountered.

H. Final Written Report

A final written report needs to be submitted 3 months after the end of the proposed budget period, with results preferably presented in manuscript form or, in the case of community projects, in form of a brief white paper with executive summary. This report should also document all presentations, publications and extramural funds that have resulted, in part, directly or indirectly from this award.

I. Acknowledgement of Support

The investigator must acknowledge support from the NIOSH MAP ERC Pilot Research Training Program in all their related publications, which resulted from the pilot grant award.

J. Annual Research Day

Investigators will be required to participate and present their project at an Annual Research Day, details to be determined. This year's Research Day will be in TBD. For more information contact: Angela Wagstaff
303-724-4409 Angela.Wagstaff@ucdenver.edu