Request for Proposals
2022

NIOSH Mountain and Plains Education and Research Center

Pilot Projects in Occupational Safety and Health

A NIOSH Education and Research Center for
Occupational & Environmental Health & 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 safety and health (OSH). There are two types of OSH projects that the MAP ERC supports through this grant program – scientific research 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.

Pilot research grants are designed to enable investigators to establish a track record in OSH research and practice, thereby increasing the likelihood of future funding. Previous grantees have contributed to the MAP ERC's mission with research on the following topics:

- Feasibility Study of a Walking Intervention for Aging Healthcare Workers
- Rapid Determination of Low-level Neptunium-239
- Preventing Occupational Zoonoses through Improved Public Health Surveillance
- Cost-Effective Monitoring of Commuter's Exposure to Volatile Organic Compounds
- Telework, Work Ability, and Well-Being among Workers with Chronic Health Conditions

Any areas of research related to occupational safety and health will be considered. Examples of OSH 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.

Projects will be funded up to a maximum of $17,500 total, including indirect costs (8% maximum), over a 12 month period. Available funding will be allocated to support 2-3 *research* and 1-2 *research-to-practice (R2P)* pilot projects in OSH. The requirements and criteria for each project type are described below. Following the description of each project type are application directions.

Applications are only accepted from organizations/institutions within the MAP ERC five state region and tribal nations within it: Arizona, Colorado, Montana, New Mexico, and Wyoming.

You may submit an application if your organization/institution is any of the following:
- Public and Private nonprofit organizations, including Universities, Colleges Research Institutions, Hospitals and Community-Based, and Faith-based Organizations
- For profit organizations, and we particularly encourage submissions from those meeting the federal definition of small, minority, and/or women-owned businesses
- Federally recognized or state-recognized American Indian/Alaska Native tribal governments, American Indian/Alaska Native tribally designated organizations, Alaska Native health corporations, Urban Indian health organizations, Tribal epidemiology centers, State and local governments or their Bona Fide Agents. A Bona Fide Agent is an agency/organization identified by the state as eligible to submit an application under the state eligibility in lieu of a state application. If you are applying as a bona fide agent of a state or local government, you must provide a letter from the state or local government as documentation of your status. Please include this document at the end of your application.

Junior applicants and those new to the field of OSH will be given priority.

Priorities of the Mountain & Plains ERC
Although any proposal that meets an OSH need will be welcomed and considered, proposals will be particularly encouraged and given priority if they meet the priorities of the National Institute for Occupational Safety and Health (NIOSH) National Occupational Research Agenda (NORA) Goals/Objectives (https://www.cdc.gov/nora/default.html) and the MAP ERC's research and practice priorities. With help from its External Advisory Board, the MAP ERC has identified regional priorities in OSH research and practice. Projects that address the following topics will be given special consideration:

- Disproportionate health impacts on some workers in the increasingly diverse workforce, including the interrelationships between workers' race, ethnicity, gender, sexual orientation, and generational challenges, and workplace and work factors
- Innovative ways to address the [future of work](#)
- Small businesses

The deadline for proposal submission is Wednesday, March 31, 2022 at 5:00 MDT.

Applicant Eligibility
Pilot research grants in OSH will be awarded to investigators who fit into at least one of the following categories. The examples listed in each of the following categories are not meant to be comprehensive.

1. Investigators who are new to the research field:
   a. Junior faculty members with research interests in occupational safety and health
   b. Graduate research trainees, occupational medicine residents, or postdoctoral fellows in an occupational safety and health related discipline

2. Investigators who have done research in a related discipline AND who have an interest in developing a future in an OSH discipline:
   a. Academic faculty members of any rank who are new to the field of OSH 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

3. Experienced investigators who seek to address innovative new research questions or develop innovative methods aimed to improve OSH research, translation, dissemination, or practice.
   a. Academic faculty members of any rank or researchers in government agencies, community organizations or private companies who are not new to OSH research, but who aim to gather pilot data in preparation for larger-scale projects and proposals

II. Research Pilot Projects

Pilot research grants are designed to enable investigators to establish a track record in OSH research and practice, thereby increasing likelihood of future funding.

Evaluation Criteria
For research proposals, review committee members will provide an overall impact/priority score to reflect their assessment of the likelihood for the project to exert a sustained influence on the research field(s) involved using the following evaluation criteria:

1. Significance:
   - Does the research address an important problem or critical barrier to progress in the field of OSH research?
   - Does the research address an important problem in the MAP ERC region in occupational safety and health?
   - Does the project address [NORA sector/cross sector goal(s)](#)?
   - 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?
   - Does the project address the [burden, need, impact (BNI)](#) of the occupational exposure and hazards that are the focus of the proposed research?

2. Investigator(s):
    *   Are the Program Directors and/or Principal Investigators (PDs/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 OSH research?
    *   If the project is collaborative or multi-PD/PI, do the investigators have complementary and integrated expertise; is 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 OSH 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 (e.g., 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 health and safety?
    *   Are potential problems, alternate strategies, and benchmarks for success presented?

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 OSH 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 Pilot Projects

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. The r2p approach is an interactive process in which the occupational safety and health community – including researchers, communicators, decision-makers, and employer/employee groups – work collaboratively to:
    *   Identify research needs
    *   Design, plan, and conduct studies

- Translate and disseminate existing knowledge, interventions, and technologies to relevant users for implementation in the workplace
- Evaluate results to determine the impact on occupational safety and health

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 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 this webpage.

Applicant Eligibility

Every R2P application must include at least one **Research Partner** and at least one **Community Partner**. You must include a signed letter of support from the participating partner.

1. Every R2P project must include at least one **Research Partner** who meets one of the three criteria outlined on page 4.

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

Evaluation Criteria

Review committee members will provide an overall score for the project based on criteria developed from the R2P program goals. While it is recognized that pilot funding is limited and not all projects will be able to completely address all goals, applicants should describe the R2P goals they will address, with particular emphasis on their approach to project evaluation. The six main R2P goals are to:

1. Significance:
   - Does the R2P project address an important problem in the MAP ERC region in OSH?
   - Does the project address NORA sector/cross sector goal(s)?
   - Does the project address the burden, need, impact (BNI) of the occupational exposure and hazards that are the focus of the R2P research?
   - If the aims are achieved, how will OSH R2P be advanced?

2. Investigator(s) and Partner(s):
   - Are the Program Directors and/or Principal Investigators (PDs/PIs) and other partners and/or researchers well-suited to the project?
   - If *early-stage* or *new* investigators, do they have appropriate experience and training? Do they have suitable mentors?
   - Is it reasonable to expect that the research partner(s) and community partner(s) will effectively encourage the adoption and use of research findings?
   - 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:
   - Is the target audience clearly defined?
   - Is it clear what the target audience will do with the knowledge, interventions, and/or technologies?
   - Does the project adapt research results into products tailored to the target audience? Are their methods to adapt appropriate and sufficient?

4. Translate:

- Is the project based on evidence-based OSH research?
- Does the proposal adequately describe how research findings, technologies and information will be translated/transferred into prevention practices and/or procedures?

5. Disseminate:
    - Does the project use communication, dissemination and/or implementation science to guide the movement of research into the workplace?
    - Does the project describe the channels of communication that will be used? This may include, but is not limited to trade journal publications, websites, reports, informational materials, workshops and conferences, peer reviewed journals.
    - Does the application outline future plans for the project? Does the project have the potential for partners to continue disseminating the knowledge, interventions, and technologies when the project is over?

6. Evaluate:
    - Does the project seek to determine the implementation, effectiveness and/or cost-effectiveness of a particular strategy to translate/disseminate knowledge, interventions, and/or technologies, preferably applying an established framework?
    - Does the applicant acknowledge potential problem areas and consider alternative tactics?
    - Can the project be accomplished in the timeline presented?
    - Does the proposal include adequate explanation of how the team will measure short-term success?

7. Additional Criteria:
    - Is the budget appropriate to complete the scope of the work proposed?

The review panels overall score will reflect the reviewers' assessment of the project's potential to address as many goals as feasible while also exerting a sustained influence on worker health in the region.

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 here
- The project aims and objectives do not relate to the mission and goals of the MAP ERC
- The application does not clearly relate to OSH
- 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
- Letter of Intent: To assist with planning the review process, potential applicants are encouraged to send non-binding Letter of Intent via email to Carol.Brown@cuanschutz.edu by **5 p.m. MDT, March 14, 2022.** Please provide a tentative title for your project and identify if it is a Research or R2P application. Letters are non-binding, i.e., titles may be updated and proposal types may switch categories without penalty as long as they meet other criteria and due dates. You may still submit a proposal even if you did not submit a letter of intent.
- Application deadline: **5 p.m. MDT, March 31, 2022**.
- Letters confirming the funding status of your project will be sent by **June 3, 2022.**
- Funding will be provided from **July 1, 2022** through **June 30, 2023**.
    - Note: No funds will be disbursed without proof of Human Subjects (or Animal Care) Institutional

Review Board approval (as applicable).

C. Application Forms
Please submit the following PHS398 forms (Revised 3/2020) 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/Anschutz, this application does not require internal routing for Pre-Award signature. UCD applicants, please submit unsigned form.
2) Summary/Relevance/Performance Sites (PHS398 Form Page 2)
3) Detailed Budget and Budget Justification including travel to present the results at an annual research day (will be held in Denver Metro area) (PHS398 Form Pages 4 and 5)

Your application should also include the following:

4) A biographical sketch or resume for each person involved in the project (5 page maximum for each person): http://grants.nih.gov/grants/forms/biosketch.htm
5) A proposal outlining the project. The proposal should be no longer than 5 pages (single-spaced, 12 point 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, specifically, proposals should address burden estimates, the need for the proposed study, and the potential for public health impact (https://www.cdc.gov/niosh/programs/bni.html)
   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. Approval does not need to be obtained prior to applying, but if funded, will be required before funds are released.
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 as a single PDF file to: Carol.Brown@cuanschutz.edu by 5pm MDT, **March 31, 2022**.

E. Review Committee
Complete applications will be evaluated by a review panel. The review panel consists of 7-10 members representing institutions collaborating with the MAP ERC, including the University of Colorado Anschutz Medical Campus, Colorado State University, and National Jewish Health, as well as other members with appropriate expertise. 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 for Research and R2P

projects.

F. Awards
1) Pilot project funds are rewarded on a competitive basis.
2) The budget period covers a 12 month budget period.
3) The maximum award is $17,500, including up to 8% indirect costs, for a 12 month grant duration. While not encouraged, it is possible to request a one year no cost extension for a total period of two years.
4) Grantees cannot receive more than a cumulative total of 2 pilot research or R2P grants as a Project Investigator.
5) Allowable expenses include all relevant project expenses including:
    • Support personnel including salary (maximum salary support for a faculty PI or senior mentor is limited to 5% of a 12 month equivalent salary, plus fringe benefits). The percent support of the 12 month equivalent salary for students, post-doctoral fellows, and/or research staff can be higher than 5% as long as the overall budget is within the limit outlined in this RFP)
    • 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
6) Awards will be announced in June 2022.

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 budget period, with results outlined. 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. Publications, journal articles, etc. produced under this project must bear an acknowledgement and disclaimer, as appropriate, stating: *This publication (journal article, etc.) was supported by the Grant T42OH009229, funded by the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services.*

J. Annual Research Day
Investigators will be required to participate and present their project at an Annual Research Day, date and location for 2023 to be determined. Interested applicants are invited to attend this year's Research Day, which will be on April 14, 2022. For more information about Research Day, please our website: https://coloradosph.cuanschutz.edu/research-and-practice/centers-programs/chwe/events/research-day-symposium.

K. Resulting Work
Funded recipients will be contacted periodically for 3 years to provide an update about work that resulted from this pilot project.

Publications resulting from this work should meet the NIH Public Access Policy and have a PMCID number associated with them. More information about this is located: http://publicaccess.nih.gov/index.htm