



for the Improvement of Mine Safety and Health, Inc.

**Solicitation and Call for Proposals
(AFC618)**

**EXPLORATORY RESEARCH PROJECTS
REGARDING MINING-RELATED HEALTH PROBLEMS**

Background

The Alpha Foundation for the Improvement of Mine Safety and Health is a private foundation with the mission to improve mine safety and health through funding research and development projects at qualified academic institutions and other not-for-profit organizations. The goal is to address the root causes of disease, injuries, and fatalities in the mining industry and, where possible, to achieve successful implementation of practical solutions derived from the research effort. The Foundation's agenda includes all sectors of mining (coal, metal, and non-metal) as well as both underground and surface mining. Projects supported by the Alpha Foundation must be relevant to the U.S. mining industry and funding is limited to not-for-profit organizations. Information regarding the Foundation's mission and projects that have been funded can be viewed by visiting the Foundation's website at <http://www.alpha-foundation.org>.

The Alpha Foundation is seeking proposals for exploratory projects intended to make progress toward the identification and control of hazardous workplace exposures causing or aggravating adverse health effects among mine workers. While the identification of causal factors and exposure-response relationships are of major interest to the Alpha Foundation, special attention will be given to studies that have potential for contributing to or leading to an intervention.

The Foundation is allocating \$2.0 million for this exploratory solicitation. It is expected that as many as 15 qualified grants with a maximum funding level of \$150,000 per grant and a maximum duration of 18 months will be funded. Significant additional funding will be made available to fund competitive follow-on proposals from projects demonstrating promise based on convincing evidence from the exploratory effort.

Solicitation Focus: Exploratory Research Projects Regarding Work-Related Health Problems

The emphasis for this new solicitation is to encourage novel, exploratory and developmental research efforts that challenge accepted paradigms in an effort that can lead to innovative solutions to mining health problems. By providing support for the early and conceptual stages of project development it is understood that these studies may involve considerable risk but may lead to a breakthrough in a particular area, or to the development of novel techniques, agents, methodologies, models, or pilot and feasibility studies.

The Alpha Foundation recognizes that there are limits to what can be accomplished with this project duration and funding level. Thus, it is important that proposals for these projects have one or more clear objectives leading to one or more specific endpoints believed to be achievable within the project period. Projects with findings that convincingly provide the basis for subsequent work likely to achieve advances in preventing mining injuries or illnesses will be invited to submit a proposal to request additional funding to further advance the findings or developments.

Research Approach: Priority attention will be given to proposals with one or more of the following design features:

- Development or demonstration of tools, methods or strategies for the identification and/or prevention of work related health effects in one or more well defined mine working environment
- Pilot or feasibility projects that lay the groundwork for more extensive work
- Identification and/or clarification of exposure-response relationships
- Development or demonstration of surveillance methods for exposures and/or health outcomes that may have widespread applications

Focus Areas: The Foundation is particularly, although not exclusively, interested in proposals that address one or more of the following substantive areas:

- **Musculoskeletal Disorders:** Research that identifies mining jobs and operations with especially high rates of work related musculoskeletal disorders and makes progress toward one or more of the following: characterization of the risk factors associated with these disorders; development and implementation of engineering changes or other job modifications to reduce these risks; positive impacts on productivity, quality and absenteeism; and effectiveness evaluations
- **Lung Health:** Examination of the relationships between mine environment exposures and the development or exacerbation of asthma and related lung conditions; evaluation and implementation of strategies for reducing workplace exposures causing or exacerbating these conditions
- **Rock Dusting Effects:** Assessment of the impact of rock dusting and hydrophobic rock dust exposures on health risks to the mine worker

- **Noise Exposure Reduction:** Evaluation of the effectiveness of engineering, personal protective or administrative controls that reduce noise exposure in mining environments where workers are known to have high rates of noise induced hearing loss
- **Progressive Massive Fibrosis:** Studies to better characterize the scope, characteristics and opportunities for prevention of the recent rise in cases of progressive massive fibrosis particularly among coal miners in central Appalachia.
- **Heart Disease:** Studies in mining environments where workers have high rates of cardiovascular diseases that examine the relationships between work related risks (such as noise, vibration, chemical exposures, stress and heat) and other risk factors (such as smoking, weight, age and stress).

Eligibility Criteria and Limitations

Exploratory research project proposals in response to this solicitation will be accepted only from U.S.-based academic institutions and not-for-profit organizations qualifying as exempt from taxation under the Internal Revenue Code.

It is Foundation policy that grant funds may not be used to support clinical trials of unapproved drugs, to construct or renovate facilities, for lobbying, for political activities, or as a substitute for funds currently being used to support similar activities.

Proposal Submission Requirements

Cover Page: A separate single cover page shall be labeled “Proposal to the Alpha Foundation for an Exploratory Research Project Regarding Work Related Health Problems.” It shall include the following information and must be signed by an authorized officer.

Title: Descriptive title of proposed work

Submitting Organization: Name and address of organization

Principal Investigator: Name and contact information (phone and email)

Administrative Contact: Name and contact information (phone and email)

Research Approach and Focus Area: Selected from areas designated in the solicitation.

Estimated Cost: Estimate of total project cost

Period of Performance: Estimate of time required to complete the research (18 months maximum)

Research Plan (maximum 15 pages)

Research Approach and Focus Area: Identify the Research Approach and Focus Area chosen from among the above choices or an alternative area with well documented importance to protection of miner health and safety. Any proposed research that does not address the particular approaches and focus areas identified in the solicitation must provide justification that the proposed area is both understudied and a priority need for effective of common miner health or safety problems.

Problem Statement and Background: This section shall provide the necessary background information to justify the relationship of the proposed concept to the solicitation objectives and that the proposed effort represents a new approach. Provide a statement of the problem that is being addressed. Follow this with a concise description of the background to the problem including why it exists, the scale of the problem, and why it is important. Identify if the problem area is unique to a specific mining sector or is universal and which areas will receive focus during this particular study.

Research Strategy: Provide a description of the research tasks that will be undertaken including study design and methodology; where the work will be done and the mining operations that will be involved; what data will be collected, how it will be analyzed and whether there are any issues regarding access to this data; what facilities will be used; who will perform the various tasks and who will collaborate. Explain why this approach was selected, including an explanation of its strengths and weaknesses. Clearly state the proposed outcome to the problem being addressed, including one or more broad objectives for the research and one or more specific aims for each objective. If the proposed research will involve any human subjects the proposal must describe the steps that will be taken to ensure human subject protection.

Project Schedule and Decision Points (Maximum 2 pages)

Timeline and Decision Points: Identify key milestones for each of the objectives and aims described above. Note any points where a decision must be made that could significantly impact the direction of the project and any point where something must be completed before further progress is possible in a critical area. Note that interim reports will be required at 6 month intervals in the project.

Deliverables: Provide a listing and brief description of all specific outputs and products planned for this project

Resources and Commitments (Maximum 3 pages)

Facilities and Equipment: Detail the facilities and equipment needed and currently available to support or implement the proposed research. Identify any additional resources that will require budgetary support.

Personnel Plan: Provide the name, role, organizational status and percent effort for each project team member. Describe their specific contributions related to accomplishing the objectives and aims of the project.

Commitment of partners and stakeholders: Identify partnerships needed to fulfill the research objectives and whether commitments have been obtained with these essential partners. Identify any for-profit effort and provide a short justification for why it is needed with recognition that only fee for services or equipment purchases is permitted. It should be noted that contracts with for-profit organizations will be acceptable only if deemed highly critical to the outcome of the proposed work.

Budget (Maximum 3 pages)

A maximum budget of \$150,000 is available for exploratory projects. Provide estimates of the following:

- **Salary:** Provide costs for proposed personnel
- **Travel:** Itemize travel requests, including the purpose of each trip
- **Supplies:** Estimate overall cost of supplies
- **Equipment:** Itemize major equipment needs including computers and software
- **Contractual:** Estimate the cost of all external contracts if applicable.
- **Other:** Itemize any other expenses by category and unit cost.
- **Indirect:** The Alpha Foundation limit on indirect costs is 20%

Appendices

Biographical Sketches: Attach biographical sketches of all personnel assigned to the project, one page maximum per person

Letters of commitment: Attach all letters of commitment with mining companies and any other partners or stakeholders whose cooperation or participation is necessary to complete the project.

How to Submit a Proposal

Proposals must be prepared in Adobe pdf format and adhere to the format provided above. The proposals must be submitted through the Alpha Foundation Grant Management System, which can be accessed at <https://glenmede.smartsimple.com/welcome/alpha>. The submission deadline for this solicitation is 5 pm Eastern Time on April 28, 2017. Any proposal, modification, or revision received after the exact time specified is “late” and will not be considered.

Disclaimer Notification: The Foundation is not responsible for the content or correctness of materials supplied in response to its solicitations and generally and specifically disclaims any responsibility for the same. Proposers are expected to appropriately mark each page of their submission that contains proprietary information. The Foundation will exercise reasonable care in protecting proprietary information from unauthorized disclosure.

Questions regarding the submission of the Proposals can be addressed to grants@alpha-foundation.org.

Funding Decisions and Notifications

The concept proposals will be reviewed and selected grantees notified on or about June 15, 2017.