Emergency Medicine Foundation
Medical Toxicology Foundation

Medical Toxicology Research Grant

Request for Proposal

Please read these instructions carefully. Applications that do not follow these instructions with regards to type size, length, format, and supporting documentation will be summarily rejected. No extension of the deadline will be granted.

Before submitting your application, please be sure that the following items have been addressed:

- Information page is included as the first page of the application packet and is fully completed (sample attached)
- Type size is 12 pt. font, single-spaced and margins are one-half (.5) inch
- Evidence of IRB approval, or at least evidence of submission to IRB, from each institution, is included in application packet (for multi-centered studies, approval from or evidence of submission to IRB/AUC for all sites or single IRB plan is required)
- Clearly stated research hypothesis
- Statement of Conditions is signed by **Principal Investigator** and **Institutional Official** and is included in application packet (see below).
- Letter of support from Emergency Medicine Chair is included in application packet
- Letter of support from each co-investigator is included in application packet
- Other grant support for all investigators is included in application packet
- Submission via the on-line application system is required. Late applications will not be considered. Submit application at https://emfoundation.aibs-scores.org

EMERGENCY MEDICINE FOUNDATION
MEDICAL TOXICOLOGY FOUNDATION

MEDICAL TOXICOLOGY RESEARCH GRANT

Application Deadline	January 20, 2023
Notification of Award	June 2023
Funding Period	July 2023 – June 2024
Funding Amount Per Award	$20,000
Number of Awards	One

GRANT TOPIC

The Emergency Medicine Foundation awards funds to support the development of research in emergency medicine. The Medical Toxicology Foundation endeavors to support medical toxicology research. The EMF/MTF Research Award is jointly sponsored by the Emergency Medicine Foundation and the Medical Toxicology Foundation. The goals of the award program are: 1) to promote toxicology-related research, 2) to advance emergency toxicology care, and 3) to facilitate the academic growth and development of future researchers in emergency medicine and toxicology by investing in the future of the specialty of emergency medicine and its sub-boards.

The EMF/MTF Directed Grant Program awards support for an active Emergency Medicine resident, Medical Toxicology fellow, or early career Medical Toxicology Faculty to complete a medical toxicology research project. Applicants may apply for up to a total of $20,000 for a one-year period. Funds are not to be used for capital equipment purchases, faculty salary support, publication costs, travel, or institutional overhead.

DEFINITION OF EMERGENCY MEDICINE RESEARCH

Emergency medicine research is broadly defined as scientific investigation designed to furnish new knowledge relating to emergency medical care. Such investigations may focus on basic science research, clinical research, preventive medicine, epidemiology, health care policy, or emergency medicine teaching and education.

DEFINITION OF EMERGENCY MEDICINE RESEARCH

Toxicology research is broadly defined as scientific investigation designed to furnish new knowledge related to the diagnosis, management, and prevention of many toxicologic disorders including but not limited to:
drug and medication intoxication/overdose, envenomation, emerging drugs of abuse, chemical exposures, addiction medicine, adverse drug reactions and adverse drug events, occupational exposures, environmental toxins, biologic agents and warfare agents and/or forensic toxicology.

RESEARCH TOPICS

This application solicits medical toxicology research proposals. Although not mandatory, proposals utilizing the American College of Medical Toxicology (ACMT) ToxIC (Toxicology Investigators Consortium) Registry are particularly encouraged. This Registry is a multicenter database of patients cared for by medical toxicologists and includes data on age, sex, agent class, specific agent name, clinical symptoms, syndromes and signs, and treatment rendered. Investigators interested in using this database can contact ToxIC at toxic@acmt.net to get more information on the database.

QUALIFICATIONS AND RESPONSIBILITIES OF THE INVESTIGATORS

This grant is available to any physician who will be enrolled as a resident or medical toxicology fellow in good standing in an ACGME approved emergency medicine residency or medical toxicology fellowship or a fellow in any emergency medicine sub-specialty training programs for the proposed funding year. The

resident/fellow applicant must have an appropriate Emergency Medicine or Medical Toxicology faculty supervisor. The research award is also open to early career Medical Toxicology Faculty, defined as those within five years of their fellowship or residency completion,

It is required that the applicant submit a **letter of support from a preceptor** at the applicant's institution. This letter must describe the preceptor's and the applicant's roles and responsibilities in the proposed project. The preceptor must hold a have and MD, DO, PhD, PharmD or equivalent degree. The preceptor must have proven ability to pursue independent research as evidenced by original research publications in peer-reviewed journals and/or funding from extramural sources. The preceptor may be in any department within the applicant's institution. It is also required that the applicant submit a **letter of support from their Chair**, stating their support and that the applicant is in good standing at the time of the award.

INSTITUTIONAL SUPPORT

The applicant and preceptor assume responsibility for conducting the research projects and supervising the work of the resident or fellow and associate investigators. The applicant and preceptor must demonstrate that access to a suitable caseload or patient population will be available for study during the funding period if a clinical research project is proposed. If a basic science or nonclinical project is proposed, the applicant must show that adequate and appropriately equipped laboratory space will be available during the funding period. **Research involving animals or human subjects must be approved by the institutional review board (IRB), or its equivalent, and a copy of the approval or pending approval sent with this application. IRB approval must be documented prior to issuance of EMF funds.**

EVALUATION OF APPLICATIONS

Each application will be reviewed by emergency medicine and medical toxicology specialists who are experienced in basic, clinical and translational toxicology research. Each application will be judged by: 1) the role of the applicant in the initiation, development, conduct, and reporting of the project, 2) the scientific content of the research project, including literature review, hypothesis statement, methodology, sample size calculations and planned statistical analysis, 3) the significance of the project, and 4) the qualifications of the preceptor. There should be an acknowledgement that the resident/fellow is the author of the grant application. The final funding decision will be made by the Emergency Medicine Foundation Board of Trustees, and all decisions are final.

TERMS OF THE GRANT

Change of Status of Principal Investigator

If the Principal Investigator changes affiliations or ceases research in the field for which the award was made, the award will terminate, and the remaining balance will be returned to the Emergency Medicine Foundation and Medical Toxicology Foundation.

Location of Work

Grants are awarded for investigations in the United States at an accredited medical school, medical center, or institution affiliated with a university teaching program. The preceptor will make all arrangements for conduct of the proposed research projects.

Financial Support

Semi-annual payments will be made to the preceptor's research institution that will be responsible for administering the funds. The Emergency Medicine Foundation will not be responsible for institutional overhead. Detailed audited financial reports may be required.

Liability of the Emergency Medicine Foundation

The EMF assumes no financial liability if patient care responsibilities of any kind are undertaken by the applicant or preceptor in the course of funded research. The preceptor and the preceptor's institution acknowledge that the EMF and MTF are not legally liable for the conduct of the resident applicant, fellow applicant, or the preceptor and associate investigators.

Patent Policy

The preceptor and preceptor's institution acknowledge that if a patentable invention or discovery is conceived and reduced to practice by the applicant during the term of their award, the EMF must be apprised of the invention and the institution's plans for protecting such invention under existing institutional patent policy. The EMF will defer to institutional policies where they are in compliance with those of the Federal government. The EMF reserves the right where the institution has no patent policy, or policies not in compliance with those of the Federal government, to claim rights and interests in the invention or discovery.

Limitations on Grants

The EMF/MTF is not fiscally responsible for funds necessary for the project's completion. Funds are not to be used for capital equipment purchases (i.e. equipment costing more than $500 and with an expected lifespan of more than one year), faculty salary support, publication costs, travel, or institutional overhead.

It is required that the applicant submit a letter of support from a preceptor at the applicant's institution. This letter must describe the preceptor's and the applicant's roles and responsibilities in the proposed project. Resident/fellow applicants must also submit a letter from their residency or fellowship director indicating that the applicant is in good standing and that they will have adequate time for completion of the proposed project.

The applicant must also submit a letter from the Chair/Director of Emergency Medicine stating that adequate funds will be available to the resident to complete the proposed project if the study budget exceeds $20,000.

SUPPORT FACILITIES

The applicant must submit letters of support if the proposed project uses facilities not routinely available to or directly under the supervision of the applicant's department,

PUBLICATIONS

All discoveries resulting from work supported in part by the Emergency Medicine Foundation should be made available to the public and scientific community through approved scientific channels such as national meetings and peer reviewed publications. Publications will acknowledge the support of the Emergency Medicine Foundation and the Medical Toxicology Foundation. Two reprints of each publication should be forwarded to the EMF.

PROGRESS REPORTS AND MONEY MANAGEMENT

The preceptor and applicant are required to submit a six-month progress report and a final progress report within thirty days of the conclusion of the award year. Additional reports may be required. Failure to provide an interim report will delay transmission of funds. Furthermore, failure to provide interim and final reports to the Foundation may negatively impact your institution's ability to apply for future EMF awards. The EMF will maintain the copyright of all such reports. Progress reports must include an accounting report using Generally Accepted Accounting Procedures showing the distribution of funds with a signature from an institutional official (e.g., accountant, grants manager, administrator from the Office of Sponsored Research). The EMF reserves the right to withhold release of interim funds if >25% of the previous cycle remains unspent. The EMF allows up to 25% of funds to be carried over from one cycle to the next.

ABSTRACT PRESENTATION

Even year grant awardees (2022 - 23) are required to present their work at the American College of Emergency Physicians Scientific Assembly/Research Forum immediately following the completion of the award year as a poster presentation. Funds cannot be requested to cover the travel cost to attend the Research Forum.

Odd year grant awardees (2023 – 2024) are required to present their results at the American College of Medical Toxicology Annual Scientific Meeting (ASM) following the completion of the award year as a platform or poster presentation. Funds cannot be requested to cover the travel cost to attend the Research Forum ASM,

although the Annual Scientific Assembly ASM meeting registration fee is waived for the presenter.

Awardees have the option to also submit results for oral presentation at the ACEP or ACMT off-year meeting if they desire. However, funds to cover travel cost to attend either the ACEP or ACMT meetings cannot be requested.

CONTACT INFORMATION

Please address questions to Cynthia Singh, MS, Deputy Executive Director at csingh@acep.org.

APPLICATION INSTRUCTIONS

Do **not** submit an incomplete application. **An application will be considered incomplete if it is illegible, if it fails to follow instructions, or if the material presented is insufficient to permit an adequate review.** Unless specifically required by these instructions (e.g. human subjects certification, vertebrate animals verification) do **not** send supplementary material.

The application consists of the following sections:

1. INFORMATION PAGE

Name the **one** person responsible to the applicant organization for the scientific and technical direction of the project. Choose a title that is descriptive and specifically appropriate, rather than general. List the Mentor and any associate investigators.

2. ABSTRACT

Brief summary of research proposal. Include rationale, research hypothesis, specific aims, and significance.

3. TABLE OF CONTENTS

4. INTRODUCTION TO REVISED APPLICATION, if applicable. (limit 2 pages)

EMF will consider revised proposals, and two additional pages are provided to introduce reviewers to the revised proposal. Key things to keep in mind when submitting a revised grant:

a. The introduction to the revision should provide a concise summary of reviewers' comments from any previous application and should discuss in point fashion how the revised application has addressed these concerns.
b. Revised applications are not reviewed outside of the normal review process. Such applications may be more competitive than first-time submissions, but not necessarily so.
c. Revised applications are reviewed as new science. Revised applications will not automatically be considered better applications within the review process.
d. In the event of a resubmission, the committee will attempt to return applications to their original reviewers when possible. However, regular turn-over of the committee membership prevents the SRC from guaranteeing that a grant will be reviewed by the same individuals reviewing the original application.

5. RESEARCH PROPOSAL (limit 6 pages)

Please use the following subheadings:

Specific Aims

- State concisely the goals of the proposed research and summarize the expected outcome(s), including the impact that the results of the proposed research will exert on the research field(s) involved.
- List succinctly the specific objectives of the research proposed, e.g., to test a stated hypothesis, create a novel design, solve a specific problem, challenge an existing paradigm or clinical practice, address a critical barrier to progress in the field, or develop new technology.
- Specific Aims are limited to one page.

Significance

- Explain the importance of the problem or critical barrier to progress in the field that the proposed project addresses.

- Explain how the proposed project will improve scientific knowledge, technical capability, and/or clinical practice in one or more broad fields.
- Describe how the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field will be changed if the proposed aims are achieved.

Innovation

- Explain how the application challenges and seeks to shift current research or clinical practice paradigms.
- Describe any novel theoretical concepts, approaches or methodologies, instrumentation or interventions to be developed or used, and any advantage over existing methodologies, instrumentation, or interventions.
- Explain any refinements, improvements, or new applications of theoretical concepts, approaches or methodologies, instrumentation, or interventions.

Approach

- Describe the overall strategy, methodology, and analyses to be used to accomplish the specific aims of the project.
- Discuss potential problems, alternative strategies, and benchmarks for success anticipated to achieve the aims.
- If the project is in the early stages of development, describe any strategy to establish feasibility, and address the management of any high-risk aspects of the proposed work.
- Include any available information on Preliminary Studies. Discuss the PD/PI's preliminary studies, data, and or experience pertinent to this application. Preliminary data can be an essential part of a research grant application and help to establish the likelihood of success of the proposed project.
- Be sure to address:
    a. Preliminary data you or your team have completed to show feasibility and the ability for your team to do this project.
    b. A statistical analysis plan with power calculations as needed
    c. Anticipated challenges and mitigation strategies: Characterize the potential threats to successful completion of the proposed work, and outline what steps will be taken to mitigate risk.
    d. Knowledge translation: Describe how the research findings will be communicated to the scientific community and/or other groups (e.g. the public), where appropriate.
    e. Implications: Describe the importance of the proposed work, and how it is expected to advance the science of medical toxicology.
    f. Timelines and feasibility: Describe the anticipated timelines of the proposed research and its various elements, and justify the feasibility of the proposed research within the requested funding period. It may be helpful to show a figure in this regard, which may be included in the body of the application.

6. PERSONAL STATEMENT (limit 1 page)

The applicant should compose and submit a personal statement that addresses:

a. the applicant's interest in the topic and how this project fits into the career goals
b. the applicant's perception of his/her role in the project
c. any additional pertinent experience or interests the applicant wishes the committee to consider

7. LETTER OF SUPPORT FROM PRECEPTOR (limit 1 page)

Include a letter from the preceptor expressing support for the project and describing his or her qualifications as preceptor and involvement in the proposed research project. The letter should also highlight the preceptor's intended work with the applicant. The preceptor's primary appointment must be in the department or division of emergency medicine or medical toxicology.

8. ROLE OF PARTICIPANTS (limit 1 page)

List the applicant and preceptor and any associate investigator. Include a brief description of how and to what extent each will be involved in the proposed project.

9. BIOGRAPHICAL SKETCHES

Use the NIH Biographical Sketch Format Page available on the internet at https://grants.nih.gov/grants/forms/biosketch.htm Information is requested for the applicant, Preceptor, Mentor and any associate investigators who will be involved with the projects.

10. RESOURCES AND ENVIRONMENT

Describe the research facilities (laboratory space, clinical population, etc.) available for training. If computer access or statistical support is available, it should be described in this section.

11. BUDGET

Use the NIH Form Detailed Budget for Initial Budget Period available on the internet at www.grants.nih.gov/grants/funding/phs398/phs398.html# Indicate how the money will be spent. Justify all major expenditures. Use the current NIH salary cap. Institutional overhead is not allowed.

12. OTHER SUPPORT

List all current and pending intramural and extramural research funding for the applicant, Mentor and co-investigators. For each item indicate the grant identification number, grant type, PI, funding source, annual direct costs, funding period, percent effort, grant title, and brief description of project. For all items indicate whether there is any scientific or budgetary overlap with the current proposal.

13. ETHICS

Human subjects. For all research involving human subjects, a part of the peer review process will include careful consideration of protections from research risks, as well as the appropriate inclusion of women, minorities, and children. The EMF Scientific Review Committee (SRC) will assess the adequacy of safeguards of the rights and welfare of research participants, and the appropriate inclusion of women, minorities, and children, based on the information in the application. This evaluation will be factored into the overall score. The information on the protection of human subjects that you are required to provide in this section is identical to information that you will be required to provide for IRB at your own institution and are required by most Federal agencies. This section must address the following items. These can be copied and pasted directly into your application.

The applicant should include specific measures on how protected health information (as defined by the Human Health Services) will be handled in accordance with the Privacy Rule of the Health Insurance Portability Accountability Act (HIPAA)."

1. RISKS TO THE SUBJECTS

a. Human Subjects Involvement and Characteristics

Describe the proposed involvement of human subjects in the work outlined in the Research Design and Methods section. Describe the characteristics of the subject population, including their anticipated number, age range, and health status. Identify the criteria for inclusion or exclusion of any subpopulation. Explain the rationale for the involvement of special classes of subjects, such as fetuses, neonates, pregnant women, children, prisoners, institutionalized individuals, or others who may be considered vulnerable populations. Note that 'prisoners' includes all subjects involuntarily incarcerated (for example, in detention centers) as well as subjects who become incarcerated after the study begins. List any collaborating sites where human subjects research will be performed, and describe the role of those sites in performing the proposed research.

b. Sources of Materials

Describe the research material obtained from living human subjects in the form of specimens, records, or data. Describe any data that will be recorded on the human subjects involved in the project. Describe the linkages to subjects, and indicate who will have access to subject identities. Provide information about how the specimens, records, or data are collected and whether material or data will be collected specifically for your proposed research project.

c. Potential Risks

Describe the potential risks to subjects (physical, psychological, social, legal, or other), and assess their likelihood and seriousness to the subjects. Where appropriate, describe alternative treatments and procedures, including the risks and benefits of the alternative treatments and procedures to participants in the proposed research.

2. ADEQUACY OF PROTECTION AGAINST RISKS

a. Recruitment and Informed Consent

Describe plans for the recruitment of subjects (where appropriate) and the process for obtaining informed consent. If the proposed studies will include children, describe the process for meeting requirements for parental permission and child assent. Include a description of the circumstances under which consent will be sought and obtained, who will seek it, the nature of the information to be provided to prospective subjects, and the method of documenting consent. Informed consent document(s) need not be submitted to the PHS agencies unless requested.

b. Protection Against Risk

Describe planned procedures for protecting against or minimizing potential risks, including risks to confidentiality, and assess their likely effectiveness. Where appropriate, discuss plans for ensuring necessary medical or professional intervention in the event of adverse effects to the subjects. Studies that involve clinical trials (biomedical and behavioral intervention studies) must include a description of the plan for data and safety monitoring of the research and adverse event reporting to ensure the safety of subjects.

3. POTENTIAL BENEFITS OF THE PROPOSED RESEARCH TO THE SUBJECTS AND OTHERS

Discuss the potential benefits of the research to the subjects and others.
Discuss why the risks to subjects are reasonable in relation to the anticipated benefits to subjects and others.

4. IMPORTANCE OF THE KNOWLEDGE TO BE GAINED

Discuss the importance of the knowledge gained or to be gained as a result of the proposed research.
Discuss why the risks to subjects are reasonable in relation to the importance of the knowledge that reasonably may be expected to result.

5. DATA AND SAFETY MONITORING PLAN (if applicable)

If your research includes a clinical trial, create a heading entitled "Data and Safety Monitoring Plan." Provide a general description of a monitoring plan that you plan to establish as the overall framework for data and safety monitoring.

Vertebrate Animals. For all applications involving vertebrate animals, the applicant must address the following five items. These five points may be copied and pasted directly into the application.

1. Provide a detailed description of the proposed use of the animals in the work outlined in the Research Design and Methods section. Identify the species, strains, ages, sex, and numbers of animals to be used in the proposed work.
2. Justify the use of animals, the choice of species, and the numbers to be used. If animals are in short supply, costly, or to be used in large numbers, provide an additional rationale for their selection and numbers.
3. Provide information on the veterinary care of the animals involved including the name of the supervising veterinarian. Include information from the Association for Assessment and Accreditation of Laboratory Animal Care International: the name of the accredited parent organization (e.g., University of X) and the certificate number and date of last inspection.
4. Describe the procedures for ensuring that discomfort, distress, pain, and injury will be limited to that which is unavoidable in the conduct of scientifically sound research. Describe the use of analgesic, anesthetic, and tranquilizing drugs and/or comfortable restraining devices, where appropriate, to minimize discomfort, distress, pain, and injury.
5. Describe any method of euthanasia to be used and the reasons for its selection. State whether this method is consistent with the recommendations of the Panel on Euthanasia of the American Veterinary Medical Association. If not, present a justification for not following the recommendations.

14. LITERATURE CITED

15. APPENDIX

Include letters of support from the department chair, residency/fellowship director, and associate investigators (required). No page numbering is necessary for Appendix. Do not use appendix to circumvent page limitations for research plans. Do not include experimental methods, protocols or figures that should be incorporated within the research project description.

Applicant/Preceptor (*Last, first, middle*): _____

Table of Contents

Information Page Sample

Full Name with Titles:_____

Name of Institution:_____

Grant Category:_____

Project Title:_____

Amount Requesting:_____

Preceptor Name:_____

STATEMENT OF CONDITIONS GOVERNING THE EMERGENCY MEDICINE FOUNDATION GRANT

It is understood that any Emergency Medicine Foundation Research Grant approved by the Emergency Medicine Foundation will be made with the following conditions:

1. Institutional overhead is not allowed.
2. The principal investigator's institution is organized for humanitarian purposes and is not a profit-making organization.
3. All reports of work achieved with this grant will acknowledge the support of the Emergency Medicine Foundation and any co-sponsors.
4. Any discovery that arises from work supported by the Emergency Medicine Foundation will be submitted for publication. Two electronic reprints of each electronic publication will be forwarded to the Emergency Medicine Foundation.
5. Independent progress reports by the applicant will be submitted to the Emergency Medicine Foundation mid-project, and within thirty days of completion of the funding period. Additional reports may be required. The Emergency Medicine Foundation will maintain the copyright of all such reports.
6. Participation in the Emergency Medicine Foundation Grantee Workshop is expected. The Emergency Medicine Foundation will reimburse travel expenses.
7. Grantees must submit the abstract of the funded project to the ACEP Research Forum at the end of the project. Research Forum is held each year during the American College of Emergency Physicians Scientific Assembly. Grant funds may not be used for travel.
8. If the named principal investigator leaves the institution or terminates research in the designated field, all remaining funds revert to the Emergency Medicine Foundation. If unused funds exist at the completion of the project, all remaining funds revert to the Emergency Medicine Foundation.
9. Patent rights will conform to institutional standards. If none exist, the Emergency Medicine Foundation reserves the right to protect such interests.
10. No research proposal will be funded unless the Principal Investigator and the Institutional Official of the sponsoring institution affirm:
    a. That the investigation(s) proposed in this application are endorsed by the Animal and/or Human Subjects Committee or other designated body of the preceptor's institution, and
    b. That any research involving human subjects conforms with the principles of the Helsinki Code of the World Medical Association, and
    c. Research involving animals or human subjects must be approved by the institutional review board (IRB), or its equivalent, and a copy of the approval or pending approval sent with this application. IRB approval must be documented prior to dispensation of Emergency Medicine Foundation funds.
    d. That research involving vertebrate animals will conform with the "Guiding Principles in the Care and Use of Animals" as approved by the Council of the American Physiological Society.
    e. Research involving vertebrate animals must have approval from the Institutional Animal Care and Use Committee.

_____ /_____

Date Signature of Principal Investigator Type Name of Principal Investigator

_____ /_____

Date Signature of Mentor, if applicable Type Name of Mentor, if applicable

_____/_____

Date Signature of Institutional Official Type Name of Institutional Official