



National Science Foundation
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Major Research Instrumentation (MRI) Program Solicitation [NSF 08-503](#) Frequently Asked Questions (FAQs)

FAQs for the January 24, 2008 Deadline:

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- [My university established a Research Foundation specifically to promote, encourage and provide assistance to the research activities of the university, and](#)

the Foundation is a separate not-for-profit organization incorporated under State laws and regulations. The Research Foundation also acts as the fiduciary entity for private contracts and grants, and is lead by a separate governing board and committees. Would a proposal submitted by the Research Foundation count toward our institutional proposal limit or would they be considered a separate entity entitled to submit up to three proposals?

- We are a separate campus within a multi-campus state university, and have always submitted proposals without having submissions from other separate and distinct campuses count toward an institutional proposal limit. Does the solicitation allow for up to three proposals from each campus?

1. I am considering submitting an RUI proposal to the MRI program. Is that appropriate?

No, you should submit a regular MRI proposal, following guidelines in Solicitation [NSF 08-503](#) and include a statement (in Supplementary Documents, per Section V.A.9) classifying your organization as a non-Ph.D. granting organization.

2. Is it necessary to address the Broader Impacts Criterion in our Major Research Instrumentation proposal?

Yes. With any NSF proposal you must address the broader impacts criterion. Each Major Research Instrumentation proposal is reviewed based on the following criteria: Intellectual merit, broader impact(s) and management plan. The **review form** {<http://www.nsf.gov/od/oia/programs/mri/mrireviewform.pdf>} asks the reviewers to delineate the strengths and weaknesses for each of these criteria.

3. What is the recommended way to address the broader impacts criterion in a MRI proposal?

As with any other NSF proposal, you should address the broader impacts criterion in a way that works best for your research and education activities and the mission of your organization. You can review several examples of broader impacts on the web: <http://www.nsf.gov/pubs/gpg/broaderimpacts.pdf>

4. What is the “optimal” dollar amount that I should request from the MRI program to increase my chances of receiving funding?

There is no optimal request. The proposals that do the best are the ones that request an instrument that meets the current and future needs of a research group.

5. I have heard that MRI proposals that are around \$800,000 or higher undergo a multiple-level review process. Is this true?

MRI proposals are reviewed in directorates and divisions using review procedures that are appropriate for the particular research communities. Typically, both the reviewers and the NSF program directors pay more attention to larger requests to ensure that such awards are meritorious. Each directorate/office may select its two best large proposals (the definition of large may vary from year to year but is typically close to or greater than \$1M) to compete for funds that the MRI Program sets aside for large requests. These proposals are then discussed by representatives of all directorates to ensure the best investment for these set-aside funds. Most of the directorates/offices also fund a number of large requests directly from their own portion of MRI funds.

6. What is necessary to address in our management plan?

Management plans required for acquisition and development proposals differ.

For instrument acquisition the plan should detail maintenance and operation projections. Specify how and by whom the requested instrumentation will be operated over the period of three years. Also, describe the technical expertise needed to maintain and operate the instrument with anticipated costs. Describe the facility in which the instrument will be housed. Describe procedures for allocating the new instrument time, if appropriate, and describe plans for attracting new users. Specify the organizational commitments regarding housing and costs associated with instrument maintenance and operations.

For instrument development the management plan should detail the design and construction phases of the project. Also, include plans for making instrument design readily available to other researchers, e.g., for transferring the technology to other U.S. academic, industrial or government laboratories or for commercializing the instrument. Describe the schedule of the project activities, broken into tasks, and estimate cost of each activity. Describe the technical expertise needed to execute each activity. Include the description of parts and materials needed for the construction phase and the associated costs. Specify timelines and deliverables for each activity. List risks associated with each activity and methods for reanalyzing and modifying the project plan if necessary. Describe the organization of the project staff and methods of assessing performance. For each member of the team include a description of the responsibilities and explain why a given position is necessary for the completion of the design and construction of the new instrument.

7. If I work in a small museum that does some research, am I eligible to apply?

Yes, if the research is in an NSF-supported field of science and engineering.

8. Why will the MRI program not provide support for the acquisition of instrumentation to be used in medical research? Are there any exceptions?

The National Institutes of Health (NIH) is the major U.S. agency that supports medical research, rather than the NSF. Hence, the MRI program will not provide support for the acquisition of instrumentation to be used in medical research and medical education (such as medical school courses), or that supports research with disease-related goals (including work on the etiology, diagnosis or treatment of physical or mental disease, abnormality, or malfunction in human beings or animals). Instrumentation related to animal models of such conditions or the development or testing of drugs or other procedures for their treatment also is not eligible for support. However, bioengineering instrumentation that advances engineering research and knowledge, applies engineering principles to problems in biology and medicine, aids persons with disabilities, and that may also have clinical uses or diagnosis- or treatment-related goals is eligible for support.

9. Can I propose to build or acquire an instrument for a specific research goal, if it will also be used as laboratory equipment either in a general research setting, or even as equipment that is used in a general science course?

Yes, but the primary purpose of the MRI program is to facilitate scientific and engineering research and research training. Therefore, the MRI program will not support the acquisition of instrumentation used primarily for standard science and engineering courses, or general purpose laboratory equipment that does not have a common or specific research focus. Other uses of the equipment may serve to indicate the broader impacts of the project.

10. Can I apply for support for the acquisition of multiple instruments in a single MRI proposal? Does a network of instruments that act as a single device count as a single instrument?

For requests under \$2 million, the MRI program accepts acquisition proposals for a single instrument, a large system of instruments, or multiple instruments that share a common or specific research focus. In FY 2008, the maximum award size was increased to \$4 million to support “mid-range” instrumentation. Requests between \$2 million and \$4 million must be for the acquisition of single instruments. Examples in this mid-size range include biological imaging instruments; 3-D shake tables; e-beam lithography and nanofabrication tools; large scale environmental monitoring instruments; proteomics facilities; spectroscopy instruments; detectors for use at accelerator labs; large scale petawatt lasers; larger computing systems; and ocean observatories.

11. What should the title of my proposal be?

PIs should use the following language: “MRI: Acquisition of ...” or “MRI: Development of ...” If the proposal is submitted by a consortium, the title should

be “MRI-Consortium: Acquisition of ...” or “MRI-Consortium: Development of ...”

12. What does NSF mean by a consortium proposal?

The solicitation states that a consortium is an entity whose members consists of the following eligible organizations: US colleges, universities and organizations of higher education located in the US, its territories and possessions, and/or US independent research museums located in the US, its territories and possessions. Therefore, for acquisition proposals, *users* must be employees from 2 or more eligible organizations; for development proposals, staff from 2 or more eligible organizations must be active participants in the development effort. The PIs and co-PIs on the proposal cover sheet must be from at least 2 eligible organizations. Of course, there are also “legally incorporated” consortia that are eligible to apply for MRI funds if they meet the requirements as listed above.

13. Why is cost-sharing back and why is NSF not providing waivers?

The America COMPETES Act directed NSF to require 30% cost-sharing for the MRI Program. The NSF Director exercised his option as provided by the America COMPETES Act by not allowing individual institutional waivers to this requirement. In lieu of waivers, the Director has exercised his option to allow operations and maintenance as eligible costs for all MRI proposals.

14. What may be used for cost-sharing, who is responsible for documenting cost-sharing and what are the requirements for maintaining documentation?

For instrument acquisition proposals, eligible costs include the cost of the instrument itself, installation, commissioning and calibration, and the operation and maintenance costs. Operation and maintenance may include operating supplies and personnel support, if the personnel are involved in operating and maintaining the instrument. Cost-sharing must fall under one or more of these categories.

For instrument development proposals, eligible project costs are limited to parts and materials needed for the construction of the instrument and commissioning costs, as well as the direct and indirect costs associated with support of personnel engaged strictly in the instrument development effort. Again, cost-sharing must fall under one or more of these categories. Support for research to be conducted using the instrument after development, operation and maintenance, publication costs, and conference travel are not eligible project costs and may not be counted towards the cost-sharing requirements.

Further detailed information on cost-sharing requirements may be found in OMB Circular A-110 (<http://www.whitehouse.gov/omb/circulars/a110/a110.html#23>). To summarize the pertinent sections:

All contributions, including cash and *third* party in-kind, shall be accepted as part of the recipient's cost sharing or matching when such contributions (1) are verifiable from the recipient's records; (2) are not included as contributions for any other federally-assisted project or program; (3) are necessary and reasonable for proper and efficient accomplishment of project or program objectives; (4) are allowable under the applicable cost principles; (5) are not paid by the Federal Government under another award, except where authorized by Federal statute to be used for cost sharing or matching; (6) are provided for in the approved budget when required by the Federal awarding agency; and (7) conform to other provisions of this Circular, as applicable.

Additional information may also be found in the NSF Proposal and Award Policies and Procedures Guide:

If proposed, the estimated value of any in-kind contributions should be included on Line M. An explanation of the source, nature, amount and availability of any proposed cost sharing also must be provided in the budget justification. Section .23 of OMB Circular A-110 describes criteria and procedures for the allowability of cash and in-kind contributions in satisfying cost sharing and matching requirements.

The submitting institution is responsible for maintaining detailed records on cost-sharing provided by the submitting institution in addition to any provided by partner or sub-awardee institutions. Records should be maintained for three years after submission of the final project report.

15. If the required costs sharing money is not spent during the award period, will I have to return the entire award allocation, or some prorated amount?

The prorated amount.

16. May instruments be placed at Federally Funded Research and Development Centers (FFRDCs)?

Only if the proposal is submitted as a consortium proposal (see above), and strongly justified.

The Major Research Instrumentation Program solicitation [NSF 08-503](#) limits the number of proposals from any single organization to three, stating that "an organization may submit or be included as a partner or subawardee in no more than three proposals." Several questions have been raised about certain entities (multi-campus, and research foundations) and whether or to what extent they may qualify as a separate and distinct organization in calculating the number of proposals from any single organization that NSF will accept under this solicitation. The following questions and answers are provided to assist you in that determination.

17. **What is meant by “partner”?**

A partner is any eligible institution that receives funding through the proposal, for example, a subcontract or subaward institution.

18. **My university established a Research Foundation specifically to promote, encourage and provide assistance to the research activities of the university, and the Foundation is a separate not-for-profit organization incorporated under State laws and regulations. The Research Foundation also acts as the fiduciary entity for private contracts and grants, and is lead by a separate governing board and committees. Would a proposal submitted by the Research Foundation count toward our institutional proposal limit or would they be considered a separate entity entitled to submit up to three proposals?**

Although the Research Foundation is a separate entity, it supports the activities of the university and cannot separately be considered an organization with interests distinct from the university. It has no students or faculty of its own separate from the university. Accordingly, research proposals submitted by the Research Foundation will count toward your institutional proposal limit.

19. **We are a separate campus within a multi-campus state university, and have always submitted proposals without having submissions from other separate and distinct campuses count toward an institutional proposal limit. Does the solicitation allow for up to three proposals from each campus?**

Large, multi-campus institutions usually have distinct campuses with their own chancellors, student admissions, and separate research activities. Such a campus which exists as a separate and comprehensive college or university, with both graduate and undergraduate programs, qualifies as a separate entity for purposes of submitting up to three proposals per campus.