

National Science Foundation

What Makes an MRI Proposal Fail, What Makes an MRI Proposal Competitive?

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QEM MRI Workshop

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<http://www.nsf.gov/od/oia/>



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Seeking Funding from NSF

Reminder:

Understand NSF before considering a proposal

- Know the Website (www.nsf.gov)
- Search Recent Awards (www.nsf.gov/awardsearch)
- Identify possible funding opportunities (www.nsf.gov/funding)
- Talk to Program Officers in Divisions where you fit
- Know the “Proposal and Award Policies and Procedures Guide” (http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf091)
- Know program requirements
- Serve as a panelist!
- Talk to successful PIs
- Know NSF’s role compared to other Federal agencies



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Programs

Major Research Instrumentation (MRI)

Reminder: Proposal Evaluation

• **What is the intellectual merit of the proposed activity?**

How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of the prior work.) To what extent does the proposed activity suggest and explore creative, original or potentially transformative concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

• **What are the broader impacts of the proposed activity?**

How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)? To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships? Will the results be disseminated broadly to enhance scientific and technological understanding? What may be the benefits of the proposed activity to society?

• **Is management plan appropriate?**

• **For instrument acquisition proposals:** Evaluate whether the plan: 1) includes sufficient infrastructure and technical expertise to allow effective usage of the instrument; and 2) provides organizational commitments for operations and maintenance.

• **For instrument development proposals:** Evaluate whether the plan has a realistic schedule and mechanisms to deal with potential risks. In addition, evaluate the availability of appropriate technical expertise to design and construct the instrument and the cost of the new technology.



<http://www.nsf.gov/od/oia/programs/mri/>

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NSF Overview

What makes an MRI proposal fail before it is reviewed?

- Proposals describing activities that fall outside of the scope of those supported by the MRI program;
- Proposals describing activities that fall outside of the scope of those supported by NSF;
- Proposals that do not adequately distinguish development efforts from acquisition or basic research efforts;
- Proposals that exceed an organization's submission limit;
- Proposals that represent standard research projects appropriate for submission to regular NSF programs;
- Proposals to place an instrument at a facility of another Federal agency or one of their FFRDCs that are not submitted by consortia;
- Proposals to place an instrument at a facility currently receiving funding through the NSF Major Research Equipment and Facilities Construction (MREFC) account;

These proposals will be Returned Without Review!



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NSF Overview

What makes an MRI proposal fail before it is reviewed?

- Applicable proposals that do not indicate appropriate levels of cost-sharing, **and** that do not contain required documentation demonstrating organizational commitment;
- Proposals that do not contain required supplemental documentation or that contain supplemental documentation other than those required and/or encouraged by the MRI program;
- Proposals that do not conform to font, margin and page limitations;
- Proposals that do not separately address the Intellectual Merit and Broader Impacts in the Project Summary;
- Proposals that do not contain a Management Plan in the Project Description;
- Applicable proposals that do not contain Results from Prior MRI Support in the Project Description.

These proposals will be Returned Without Review!



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NSF Overview

What makes an MRI proposal fail during the review?

- Proposals that do not demonstrate adequate institutional commitment;
- Proposals that do not adequately demonstrate how and by whom the instrument will be utilized, operated and maintained – i.e., proposals without a strong management plan;
- Proposals that do not demonstrate shared-use within the institution, and/or among institutions;
- Proposals that request instrumentation that is otherwise reasonably accessible;
- Proposals that do not adequately match the budget to the scope of the project;
- Proposals that do not describe research training, particularly among groups underrepresented in science and engineering;



These proposals will be not review well!

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NSF Overview

So what makes an MRI proposal competitive?

Note I say “competitive”, rather than “successful”!

Due (in part) to budget limitations, ~1/4-1/3 of submitted proposals are funded

Good proposals may not get funded



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NSF Overview

So what makes an MRI proposal competitive?

***An obvious first step
is to avoid the pitfalls
I have already
mentioned!***



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NSF Overview

But what can make an MRI proposal actually succeed?

- Describe (enthusiastically) compelling research / research training activities undertaken by the participants in your proposal → more of the same, while adequate is not compelling;
- Demonstrate how your activities will contribute within and across disciplines in both research and research training → unique contributions fare better than keeping up with the competition;
- Match your proposed effort to the mission of your institution and describe it in that context → convince reviewers that an award will build capacity to meet well thought out programmatic / institutional goals;
- Alignment with regional goals can be of value → societal goals;
- Demonstrate appropriate leadership and commitment to bring the project to completion → convince reviewers an award would lead to intended results;
- Match the budget / requested resources to the scope of the project → ask for what is needed, no more, no less – justify the request;



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