

To: School of Medicine Faculty  
From: Katherine L. Nathanson, MD and Matthew D. Weitzman, PhD  
Co-Chairs, PSOM Limited Applications Selection Committee  
Re: NSF Major Research Instrumentation (MRI) Award Program  
<https://www.nsf.gov/funding/opportunities/mri-major-research-instrumentation-program>

The University has been invited to select up to four proposals for the NSF Major Research Instrumentation (MRI) Award Program: two in Track 1, one in Track 2, and one in Track 3 (please see [award information](#) for full details). The Office of the Vice Provost for Research (OVPR) is managing the final candidate review and selection process.

**Program summary:** The National Science Foundation (NSF) Major Research Instrumentation (MRI) Program serves to increase access to multi-user scientific and engineering instrumentation for research and research training in our nation's institutions of higher education and not-for-profit scientific/engineering research organizations. An MRI award supports the acquisition of a multi-user research instrument that is commercially available through direct purchase from a vendor, or for the personnel costs and equipment that are required for the development of an instrument with new capabilities, thereby advancing instrumentation capabilities and enhancing expertise for instrument design and fabrication at academic institutions. MRI instruments are, in general, too costly and/or not appropriate for support through other NSF programs.

MRI provides support to acquire critical research instrumentation without which advances in fundamental science and engineering research may not otherwise occur. MRI also provides support to obtain next-generation research instruments by developing instruments with new capabilities that open new opportunities to advance the frontiers in science and engineering research. Additionally, an MRI award is expected to enhance the research training of students who will become the next generation of instrument users, designers, and builders.

**Please note:** A proposal for a major research instrument should describe the types of research for which it will be used. ***Research areas should be in fields of science, engineering, mathematics or education research that are typically supported by NSF programs.*** However, as long as they are in such NSF-supported fields, the specific research projects for which the instrumentation will be used need not be funded by NSF or other agencies of the federal government.

The MRI Program does not provide support for instrumentation to be used in medical education (such as medical school courses). Instrumentation intended for 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, is normally not supported. Instrumentation for research on 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, instrumentation for bioengineering research, with diagnosis- or treatment-related goals that applies engineering principles to problems in biology and medicine, while also advancing engineering knowledge, is eligible for support. Instrumentation for research in bioinformatics and biocomputing, or for bioengineering research to aid persons with disabilities, is also eligible.***

**Eligibility:**

- Open to faculty at all levels.
- For any sponsored research projects, the applicant must be eligible to serve as Principal Investigator for the project, unless otherwise noted in the LSO. Please see Penn's [PI Eligibility requirements](#) to ensure you are eligible.

**Award information:**

- Award range: \$100,000 - \$4,000,000
- Varies by track:
  - **Track 1**: Track 1 MRI proposals are those that request funds from NSF greater than or equal to \$100,000 and less than \$1,400,000.
    - Note: Track 1 proposals requesting funds from NSF less than \$100,000 will be accepted only from eligible performing organizations requesting instrumentation supporting research in the disciplines of mathematics or social, behavioral, and economic sciences.
  - **Track 2**: Track 2 MRI proposals are those that request funds from NSF greater than or equal to \$1,400,000 up to and including \$4,000,000.
  - **Track 3**: Track 3 MRI proposals are those that request funds from NSF greater than or equal to \$100,000 and less than or equal to \$4,000,000 for requests that include the purchase, installation, operation, and maintenance of equipment and instrumentation to reduce consumption of helium.
- Note: Cost-sharing requirements for new awards in the MRI Program are waived for a period of 5 years (until 2028).

### **PSOM Review Process**

Each candidate must submit the following in the order below:

- Cover Page: Proposal title and track, candidate name, academic rank and track, school, department, email address, phone number, and month and year of appointment to the PSOM faculty.
- Research proposal (maximum 3 pages, not including references): Single-spaced, 12-point font with one-inch margins, including:
  - Instrument location and type.
  - A summary of the proposed project. If this is a development proposal, describe significant new capabilities and how it builds capacity for instrument development in the institution.
  - Research activities to be enabled.
  - Description of the research instrumentation and needs
  - Broader impacts (including impact on research and training infrastructure).
  - Management plan.
- Budget (maximum 1 page): A rough draft of the budget, including estimates for equipment, salaries, etc.
- CV or Biosketch, which includes educational background, professional appointments, awards and honors. Include all current research support (start-up and external) and pending support, including dollar amounts and start/end dates.

Please submit all materials in a single pdf file in the order above to Kaitlyn Hagarty at [kaitlyn.hagarty@pennmedicine.upenn.edu](mailto:kaitlyn.hagarty@pennmedicine.upenn.edu) by **12:00pm on Thursday, August 14, 2025**. Subject line should read NSFMRI\_\_Applicant's surname\_Applicant's first name. For Examples: NSFMRI\_Doe\_John.pdf.

Please contact Kaitlyn Hagarty at [Kaitlyn.hagarty@pennmedicine.upenn.edu](mailto:kaitlyn.hagarty@pennmedicine.upenn.edu) with any questions.