



From: Faculty Research Development Office
Office of the Vice President for Research

Subject: Limited Competition: NSF- MRI: Major Research Instrumentation Program (NSF 18-513)

Date: September 4, 2020

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The 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** or **development** of a multi-user research instrument that is, 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 develop next-generation research instruments that open new opportunities to advance the frontiers in science and engineering research. Additionally, an MRI award is expected to enhance research training of students who will become the next generation of instrument users, designers and builders.

An MRI proposal may request up to \$4 million for either acquisition or development of a research instrument. Each performing organization may submit in “Tracks” as defined below, with *no more than two submissions in Track 1* and *no more than one submission in Track 2*. Any MRI proposal may request support for either the acquisition or development of a research instrument. Within their submission limit, NSF strongly encourages organizations to submit proposals that seek to develop next-generation research instruments that open new frontiers of research.

- Track 1: Proposals request funds from NSF greater than or equal to \$100,000 and less than \$1,000,000.
- Track 2: Proposals request funds from NSF greater than or equal to \$1,000,000 up to and including \$4,000,000.

Proposals requesting less than \$100,000 from NSF will be accepted only for the disciplines of *mathematics or social, behavioral and economic sciences*.

Applications for instrument acquisition proposals have a project period of up to three years and instrument development proposals have a project period of up to five years. The anticipated earliest start date is August 1, 2021. Cost-sharing of precisely 30% of the total project cost, **not** 30% of the NSF request, is required. *The cumulative amount requested from NSF must be exactly (to the nearest dollar) 70% of the Total Project Cost and the total cost sharing shown on the budget form must be exactly (to the nearest dollar) 30% of the Total Project Cost.* Further details can be found at <https://www.nsf.gov/pubs/2018/nsf18513/nsf18513.htm>. The due date for this year’s full proposals to NSF is January 19, 2021.

This is a limited competition. The MRI program requires that an MRI-eligible organization may submit or be included as a significantly funded subawardee in no more than three (3) MRI proposals. (Up to two submissions in Track 1 and one submission in Track 2.)

Please submit your 3-page pre-proposal addressing the review criteria below (plus budget overview, cost share budget and NSF formatted CV for the PI and Co-PIs; all documents in a SINGLE PDF file, 11 point font) **by NOON on Thursday, October 8, 2020 to limited@unm.edu with the subject line: NSF MRI [Track 1 or 2 - Acquisition or Development] your last name. No late submissions will be considered.**

Priority for selection will be given to pre-proposals that provide evidence that (1) this instrument will be broadly shared, servicing multiple educational and/or scientific users, and (2) there is a plan for mandatory cost sharing. Arrangements for meeting mandatory cost sharing requirements must be made in advance of submission of the pre-proposal and will be used as criteria for evaluation during the internal Limited Competition review. The OVPR has budgeted \$300,000 for cost sharing for MRI proposals; this is the total amount, not the amount per proposal. Investigators must identify other sources of cost sharing (e.g., department, college or other) that will cover at least 40% of the required cost share contribution. The initial proposal to NSF and any cost share re-budgeting upon award will require a signed cost share form.

Pre-proposals should address these major points:

Instrument **acquisition proposals:**

- Describe the requested instrumentation that clearly explains why it is needed, how the research to be enabled is compelling and justifies the instrument request. List the specific research and research training activities and projects that will be enabled with the new instrumentation.
- Describe how the instrument will make a substantial improvement in UNM's capabilities to conduct leading-edge research, to provide research experiences for undergraduate students, and to broaden the participation in science and engineering research (especially as lead PIs) by women, underrepresented minorities, persons with disabilities and/or early-career investigators. Describe current and potential funding sources that may support these activities and/or how the instrument will better enable future funding support. For requests over \$1 million, describe the impact of the instrument on the regional or national research community.
- Describe the extent to which the instrument will be used for multi-user, shared-use research and/or research training, where the instrument will be housed, and how and by whom it will be operated and maintained.

Instrument **development proposals:**

- Describe the need for development of the new instrument both within the institution and in the larger user community, including specific research program(s) and research training activities that will be enabled and the degree to which the planned uses of the proposed instrumentation constitute exciting, ground-breaking and/or transformative research.
- Describe how the proposed project will make a substantial improvement in UNM's capabilities to conduct leading-edge research, to provide research experiences for undergraduate students, and to broaden the participation in science and engineering research (especially as lead PIs) by women, underrepresented minorities, persons with disabilities and/or early-career investigators. Describe current and potential funding sources that may support these activities and/or how the instrument will better enable future funding support.
- Describe the design, construction and commissioning phases of the project, including a high-level work breakdown structure for project activities and the technical expertise that is needed, and that will be available, to execute the project.
- Explain how the end result of the effort will be a stable **shared-use** research instrument, rather than technology development, a device, a product or a technique/protocol.

If you have any questions please feel free to contact limited@unm.edu.