



U.S. NATIONAL SCIENCE FOUNDATION
2415 EISENHOWER AVENUE
ALEXANDRIA, VIRGINIA 22314

NSF 25-012

Dear Colleague Letter: Announcing the Opportunity for NSF Researchers to Participate in BioMADE Project Calls as Part of an Integrated Project Team

October 17, 2024

Dear Colleagues:

America's leadership in the bioeconomy is vital to U.S. global competitiveness, security, and economic growth. The U.S. National Science Foundation (NSF) has long supported discoveries in biotechnology, leading to development of novel biopolymers, green fluorescent proteins, gene editing techniques, and other innovations that have advanced fields from biomanufacturing to health care to food production. In response to the Executive Order on Advancing Biotechnology and Biomanufacturing Innovation for a Sustainable, Safe and Secure American Bioeconomy¹, as well as the CHIPs and Science Act², NSF seeks to create opportunities for basic researchers to participate alongside more translationally focused research and development institutes to support the growth of biomanufacturing within the U.S.

With this Dear Colleague Letter, NSF announces its partnership with [BioMADE](#), one of the Manufacturing Innovation Institutes (MIIs) established under the auspices of the [Manufacturing USA](#) program, funded by the Department of Defense as the Bioindustrial Manufacturing Innovation Institute. As with other MIIs, BioMADE engages its university and industrial membership to undertake projects that transition manufacturing technologies from Manufacturing Readiness Level (MRL) 4 (laboratory demonstration) to MRL 7 (implementation in an environment representative of production). The objectives of the MIIs are highly complementary to those of NSF, which focus on MRL 1 (basic research) to MRL 3 (proof of concept), providing opportunities to speed the translation of NSF-sponsored research to use.

NSF and BioMADE encourage researchers to create integrated projects that span from MRL 1-3 levels typically supported by NSF all the way to MRL 4-7 levels supported by BioMADE. Via a joint review mechanism, such projects that respond to one of BioMADE's Project Calls

will be jointly supported by NSF and BioMADE, with NSF supporting basic research and BioMADE funding higher MRL research and translation efforts.

SUBMISSION PROCESS

Integrated projects that include both NSF fundable basic research and BioMADE fundable MRL 4-7 research should be submitted to BioMADE Project Call 5 via the instructions provided on the [website](#). Projects should align with participating NSF programs and with the BioMADE project call focus areas. While BioMADE portions of the project must comply with relevant BioMADE membership and cost share requirements, the NSF funded portion of the project, designated as the MRL 1-3 level work, has no requirements for cost share or BioMADE membership. Principal Investigators (PIs) are encouraged to reach out to a BioMADE Program Manager to discuss project viability and alignment to the Project Call. It is strongly recommended that PIs contact the director of the targeted NSF program prior to submission to determine relevance.

Submissions to the BioMADE Project Call include submission of a white paper, due January 22, 2025, and submission of a full proposal, due April 18, 2025. At the time of full proposal submission to BioMADE, an NSF formatted proposal of the integrated project should also be submitted to one of the participating programs in NSF's Directorate for Biological Sciences (BIO) or Engineering (ENG), listed below. Proposals must be submitted in accordance with the guidance contained in the [NSF Proposal & Award Policies & Procedures Guide](#) and any program specific requirements, including deadlines. Proposals submitted in response to this DCL should be clearly identified by including a proposal title that is prefixed by "BioMADE:" after any program specific title requirements.

Included in the submission of both NSF and BioMADE proposals should be a document included as supplementary information that describes the breakdown of scope of work and budget for the basic research (NSF funded portion, MRL 1-3) and the translation research (BioMADE funded portion, MRL 4-7).

Many BioMADE funded projects have certain Intellectual Property sharing requirements governed by BioMADE's Intellectual Property Management Plan (IPMP). Relevant requirements will be clearly articulated in the BioMADE Project Call documents and an IP sharing/management plan that conforms to the BioMADE guidance should be included as supplementary material with the submission to NSF. NSF and BioMADE intend to share proposals and unattributed reviews with each other as part of this collaborative process. Nevertheless, NSF requires a proposal be submitted to one of the participating programs for external review. Given the potentially proprietary nature of some BioMADE submissions, in the duplicate submission to NSF proposers may choose to include certain privileged information that is part of the MRL 4-7 portion of the project as a single copy document that will not go out for external review, or to mark the information as privileged. If privileged

information is not included in the proposal project description, the PI should include an explanation for the omission and ensure that the project plan can be understood during review without the privileged information. To address any concerns about access to privileged information, NSF proposers are encouraged to include with their proposal submission a list of suggested reviewers as well as any reviewers not to include.

PARTICIPATING PROGRAMS

- [MCB/Systems and Synthetic Biology](#)
- [CBET/BioSensing](#)
- [CBET/Cellular and Biochemical Engineering](#)
- [CBET/Disability and Rehabilitation Engineering](#)
- [CBET/Environmental Sustainability](#)
- [CBET/Nanoscale Interactions](#)
- [CBET/Process Systems, Reaction Engineering, and Molecular Thermodynamics.](#)

Contacts for assistance in identifying the most appropriate NSF program for proposal submission are:

- David Rockcliffe, drockcli@nsf.gov, MCB/Systems and Synthetic Biology
- Steve Peretti, speretti@nsf.gov, CBET/Cellular and Biochemical Engineering
- Alex Simonian, asimonia@nsf.gov, CBET/BioSensing
- Amanda Esquivel, aesquive@nsf.gov, CBET/Disability and Rehabilitation Engineering
- Bruce Hamilton, bhamilto@nsf.gov, CBET/Environmental Sustainability
- Nora Savage, nosavage@nsf.gov, CBET/Nanoscale Interactions
- Rohit Ramachandran, rramacha@nsf.gov, CBET/Process Systems, Reaction Engineering and Molecular Thermodynamics
- Penny Norquist, pennyn@biomade.org

Sincerely,

Susan Marqusee
Assistant Director for Biological Sciences

Susan Margulies
Assistant Director for Engineering

¹ [Executive Order on Advancing Biotechnology and Biomanufacturing Innovation for a Sustainable, Safe, and Secure American Bioeconomy | The White House](#)

² Text - H.R.4346 - 117th Congress (2021-2022): Chips and Science Act | Congress.gov | Library of Congress