

Photograph by Richard Wahlstrom 1995

Critical Elements for Principal Investigators

Competitions / Proposals

Compliance

Reviewing

Grants

Acknowledgements

Reports



Lynnette Madsen, DMR

June 14, 2013

Outline

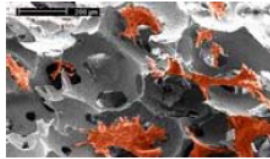
- 1. Competitions / Proposals**
2. Compliance
3. Reviewing
4. Grants
5. Acknowledgements
6. Reports

NSF's Budget

- Needs and Opportunities (SWOT): strategic plan
- President's Budget Request (builders/promises)
- Actual Budget (sequestration affects new awards)

Building Better Bone With Ceramics

Researchers at the University of Florida have developed new ceramic foams that act as scaffolds for bone repair. These foams could mean an end to the use of metal plates as bone substitutes. Bioceramic foams are lightweight, porous, and possess a large surface area; porosity allows biofluids and arteries to flow through a ceramic implant, while high surface area allows more bone regeneration to occur. In experiments, the researchers demonstrated how cells spread across the foam struts, attach to inner foam pores and spread along foam contours. All of these steps are essential for bone regeneration and fracture healing.



Credit: Juan C. Nino, University of Florida

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NSF Proposal Competition

Mary will discuss many of the competitions for remainder of FY 2013 & FY 2014

- no: FRG
- unclear: MWN (participants change annually)
- yes: CAREER, GPG/Fall window, SNM, DMREF
- Your opportunity to provide input to FY 2015

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Materials Research (DMR)

Special Announcements

The new MRSEC solicitation (NSF 13556) was released on April 15, 2013. To access the solicitation go to:
http://www.nsf.gov/publications/pub_summ.jsp?WT.z_pims_id=5295&ods_key=nsf13556

NSF Notice Regarding Automated Compliance Checking of FastLane Proposal Submissions: <http://www.nsf.gov/pubs/2013/nsf13066/nsf13066.jsp>

Appointment of Dr. Mary Galvin as Division Director, Division of Materials Research (DMR)

NSF Announces New Funding Opportunity: Next-Generation National Nanotechnology Infrastructure Network (NG NNIN - NSF 13-521). [Read more](#) about this opportunity or go directly to the [solicitation](#).

The work of Materials 2022 (a subcommittee to the Mathematical and Physical Sciences Advisory Committee) is now complete. On behalf of the NSF and the community, we would like to thank the committee for their hard work. Here is the link to the report:
http://www.nsf.gov/attachments/124926/public/DMR_Materials_2022_Report.pdf

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Proposals

[NSF Guide to Proposal Writing](#)

Principal Investigators (PIs) should make contact with Program Directors if they are uncertain about the fit of their project to a given program. PIs should ensure that the primary program appears first in the section: for consideration by NSF ORGANIZATION UNIT(s) on the Cover Page.

All inquiries about proposals for dedicated education and diversity activities should be directed to Dr. [Michael J. Scott](#), DMR. PIs should contact their Program Director for **supplement requests** for Research Experiences for Undergraduates (REU) and education efforts.

The submission window applies to unsolicited proposals submitted to DMR programs, except for the following which may be submitted at any time during the year: Grants for Rapid Response Research (RAPID), EARly-concept Grants for Exploratory Research (EAGER), proposals for workshops or conferences, proposals to the DMR National Facilities Program, and supplements to existing grants. For proposals submitted in response to special announcements or solicitations, the deadline dates specified in the announcement or solicitation apply.

Disciplinary Program Proposals for DMR Submission Window

DMR Window: The window for submitting unsolicited proposals to DMR begins on September 1 and ends on October 31, annually. If the closing date for the submission

General Proposal Guidance

- Senior personnel salary (section A) normally does not exceed 10% of total budget in CER program.
- Proposals with more than one investigator per year usu. should not exceed \$250K/year
- International: mark on the cover sheet and see <http://www.nsf.gov/div/index.jsp?org=OISE> for items to include in new proposals with international collaborations.
- Human Subjects: Researchers should file their proposal with their local IRB at the same time they submit it to NSF, more information: <http://www.nsf.gov/bfa/dias/policy/human.jsp>

CER Reviewer Suggestions

- All PIs to suggest 3 to 6 reviewers with each proposal
- People from ceramics, glasses and inorganic carbon-based materials communities at arms length: **AVOID CONFLICTS** -- no former students, supervisors or post-doctoral fellows; no recent collaborators (from past 4 years); no relatives, etc.
- Full names, e-mail addresses (to facilitate electronic review), affiliation, and their key areas of expertise.
- Information is used to establish a broader database for reviewers in CER. Industrial & international reviewers and those from underrepresented groups are particularly welcome

Ensuring Diversity & Balance

- It's PD's responsibility to find reviewers of diverse backgrounds!
 - **Junior/Senior**
 - Geographic
 - Gender, **Race & Ethnicity**
 - Individuals with disabilities
 - Types of institution (**industry**, academia, government laboratories, etc.)
 - Expertise
 - **New** vs. Experienced Reviewers

Outline

1. *Competitions / Proposals*
2. **Compliance**
3. *Reviewing*
4. *Grants*
5. *Acknowledgements*
6. *Reports*

Compliance

Previous DD: adherence to compliance. Common reasons for RWR:

1. Omission of section: Results from Prior NSF support (within 5 years) for PI **and any co-PIs in prescribed format from Project Description**
2. In **References Cited**: Omission of journal article **titles** or use of ***et al.*** in author lists (include all names!)
3. **Incomplete** information in Current & Pending Support
4. Incomplete Biographical Sketches (i.e., failure to include the list **collaborators 4 years, co-editors 2 years, graduate advisors, postdoctoral sponsors, postdoctoral scholars 5 years & all prior graduate students**)
5. Mentoring plan (max. page) in Supplementary Docs

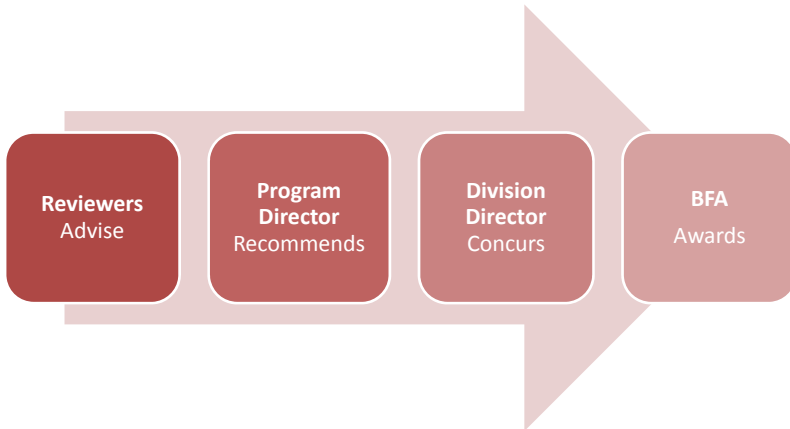
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NSF's Merit Review Process



Who Does What?



Merit Review Process

- CAREER in CER: often ad hoc mail reviews
- Unsolicited proposals in CER: often ad hoc mail, but used panels in FY 2012
 - Incl. GOALI, RUI
- INSPIRE, EAGER, RAPID:
 - Internal review allowed; external review may be used
- Other proposals:
 - Within DMR: varies
 - Outside DMR: often panel, particularly for solicitations

Reviewer Responsibilities

- Voice in process
- Evaluation
- Advice

Conflicts of Interest (COIs)

- Not at arms length
 - you and/or your spouse work at this institution, recently worked at it, or are being considered for positions at it), accepted \$ from institution in past year, serve on board, ...
 - You are collaborating with PI/Co-PI and/or have published with them in past 4 years, co-editing past 2 years, business or family relationship, ...
- You cannot be impartial
- If uncertain, ask me – reviews with COIs cannot be used or released to the PI

Effective Reviews

- Provide a clear opinion
(not a description of the proposal)
- Opinion is justified
 - Explanation
 - Published reference/s
 - Examples from proposal
- Opinions that cover many of the key components under intellectual merit, broader impacts, diversity, education, additional review criteria,

What NOT to Address

AVOID:

- Comments on the PI's career future (e.g., "coming up for tenure")
- Penalizing for failure to address previous reviewers comments -- each proposal is considered NEW.



Lynnette's Wish List

- **Write a great review & submit it via fastlane within 6 weeks & suggest other reviewers, particularly ones from industry or underrepresented groups alongside their email addresses**
- Write a great review within 6 weeks
- Write a review within 2 months
- Decline to review in fastlane within 2 weeks, but suggest other reviewers
- Decline to review & let me know somehow



Program Director Responsibilities

- Select Appropriate Reviewers
- Guide Reviewers, as needed
- Use input from reviewers (unless external review is waived) and write Internal Review Analysis on every proposal
 - Summarize
 - Evaluate and Justify
 - Recommend
 - Maintain a balanced budget and program portfolio

Review budget &
co-funding
opportunities

Portfolio Balance

- ✓ High Impact
- ✓ Junior through to Senior PIs
- ✓ Program portfolio
- ✓ PI's other support
- ✓ Impact on Institution/State
- ✓ Diversity & Educational Impact
- ✓ Programmatic Consideration
- ✓ Launching vs. Maintaining

Program Director Recommendation Options



Award



Decline, or



(in rare cases) Hold

BFA/DGA Responsibilities

- Review for consistency with applicable laws, regulations, policies, and directives
- Obligate grant and agreement funds
- Communicating awards:

**Division of Grants and Agreement's
Award Letter
is the only official notification of an award**

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Grant Issues

- If you have questions or problems with your grant, please start by inquiring with your university's Office of Sponsored Projects.
- If you cannot resolve issues there, contact me (lmadsen@nsf.gov 703-292-4936),
or
have your Office of Sponsored Projects contact the cognizant Grants Officer (Elizabeth Gebremedhin, egebreme@nsf.gov, 703-292-4444) at NSF

In response to the suggestion about micro-grants for PIs:

Change of Scope

- **Proposal & Award Policies and Procedures Guide**

- Part I – Grant Proposal Guide (GPG)

- **Part II – Award and Administration Guide (AAG)**

- Chapter II: Grant Admin.,

- Section B. Changes in Project Direction or Management:

- “Neither the phenomena under study nor the objectives of the project stated in the proposal or agreed modifications thereto should be changed without prior NSF approval. ...

- NSF believes that the PI and co-PI, operating within the established policies of the grantee organization, should feel free to pursue interesting and important leads that may arise during the conduct of a research (or other grant-supported) project or to adopt an alternative approach which appears to be a more promising means of achieving the objectives of the project. Significant changes in methods or procedures should be reported to appropriate grantee official(s) and the cognizant NSF Program Officer.”

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PI Responsibilities

- ❖ Acknowledge NSF (presentations, publications, press releases)
- ❖ Do not include journal articles, etc. in your annual and final reports that acknowledgement other grants & do NOT acknowledgement the grant
- ❖ Communicate significant accomplishments to Program Director (PD) (e.g., Nature/Science articles, Covers of recognized journals, press releases, etc.) so that NSF’s Office of Legislative & Public Affairs (OLPA) can work with you and your institution
- ❖ Deliver highlights as requested/needed (e.g., DMR requests 1-3 pages annually)
- ❖ Submit reports on time: **late reports after May could lose their increment**
- ❖ 1st NCE through SRO; 2nd through NSF
- ❖ Review proposals as appropriate & as time/schedule permits

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Overall Expectations

- Publications: at least consistent with level of funding; acknowledge NSF support
 - If multiple lines of support are acknowledged, make it clear what or who each agency funded
- Broader impact activities: carried out, and included in report, with an evaluation or assessment (where appropriate)
 - Equivalent activities acceptable; use **Changes in Objectives or Scope** in annual reports to indicate a change in the intellectual merit or broader impact activities

Highlights and Press Releases

Highlights:

- Each year, the Division of Materials Research (DMR) also requests highlights. These can effectively convey the excitement of scientific discovery NSF supports. These highlights are useful to evaluate your progress, to recognize your contributions within NSF, and in documenting NSF activities for the Congress and the public.

Major Achievements / Press Releases:

- Advance notice of important discoveries and/or publications in high-impact journals is requested to assist NSF in preparation of press releases.
- Please also notify me whenever you receive honours from national/international scientific societies.

Reports vs. Highlights vs. Press Releases

- Reports:
 - Necessity to meet budgetary and reporting requirements
- Highlights:
 - Used internally for program promotion,
 - Used for illustration of project success (externally & internally)
 - For outreach to the Public including teachers and students
 - Budget development
 - Presentations (internal & external) by PD, DD, AD, and/or the Director, etc.
- Press Releases:
 - Get information out quickly and put focus on best new results
 - Good for PI, university, NSF (program visibility, overall budget, etc.)

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NSF Grant Numbers

- 7 digits, phone numbers without dashes/ spaces
- Sometimes leading zero, e.g., for awards made in FY 2000 through FY 2009.
- Examples:
 - 1304912
 - 0956071
 - 0810138
- **Include your Proposal / Grant # in subject line of all e-mails to NSF**

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Now: Three Types of Reports

1. Annual Project Reports
 - at least 90 days prior to the end of current budget period
2. Final Project Reports
 - Within 90 days of grant expiration
3. Project Outcome Report to General Public within 90 days of grant expiration
 - Submitted electronically via Research.gov and posted as submitted

Changes to Report Structure in 2013

- Reporting period only – not cumulative, not even for final reports
- Specific questions for articles – peer review? NSF acknowledgment?
- Attachments: primarily used for figures & tables, or manuscripts under review

How to know when it is due

- Due: at least 90 days before end of your grant's budget period
- Specific due dates are available in Fastlane
- Once due, you will receive reminders monthly
 - It is usually not necessary to submit the report immediately, aim to have it submitted within the first month to allow time for the PD to read it, request changes and approve it
 - You and your co-PIs cannot receive **any** NSF awards as a PI or co-PI until **ALL** overdue reports are cleared
- **NCEs give you a new end date and may invoke need for an immediate annual report**

Timeliness of Reports

- Approximately every 12 months; initially may be earlier to facilitate “spend out”
- **Spend Out**: NSF spends its budget annually – this process starts in **June** of each year. Money not spent by July 1st in a given program **may be swept** – and then is lost to the program, project & PI. Money not spent by NSF by the fiscal year-end has been held against NSF in the next budget round.
- **Submit your reports on time!**

Final Reports & \$0

- Although it is not necessary to spend your funds year-by-year, it is ESSENTIAL to do so before submitting your final report
- Once the final report is approved, the money is gone – from you & from NSF – it is returned to Treasury
- **Do not submit final reports unless the balance is zero;** if you anticipate difficulty, request well in advance a No-Cost Extension (NCE) from your SRO
- Reason for NCE: Incomplete aspects of project (not unspent \$).