

Funding Opportunities at the NSF or How to Negotiate NSF.gov

Cort Anderson Program Officer

Division of Biological Infrastructure

National Science Foundation

NSF's Strategic Goals



People –
*A diverse,
internationally
competitive
and globally-
engaged
workforce*



Ideas –
*Discovery
across frontiers
and
connections in
service to
society*



Tools –
*Accessible, state-
of-the-art
information bases
and shared tools*



NSF STRATEGIC PLAN FOR FISCAL YEARS (FY) 2011-2016




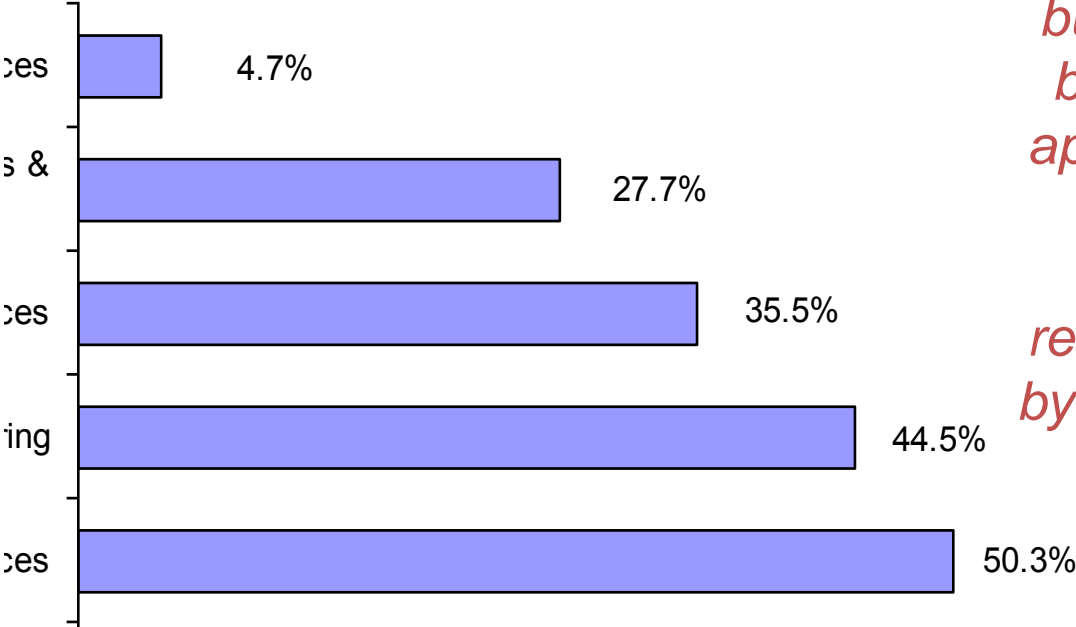


TABLE OF CONTENTS

I. INTRODUCTION	1
II. MISSION	2
III. VISION	3
IV. PLANNING IN A DYNAMIC ENVIRONMENT	3
V. STRATEGIC GOALS AND PERFORMANCE GOALS	5
VI. STRATEGIES AND MEANS	16
VII. EVALUATION AND ASSESSMENT	18



NSF Support for Basic Research at Academic Institutions: Share of Total Federal Support



With an annual budget of about \$7 billion, NSF funds approximately 25 % of all federally supported basic research conducted by U.S. colleges and universities.

What's a Program?

- A well-defined grant-giving function, usually with a well-defined budget
- Usually means an individual investigator grant program, but could also refer to a facilities program (e.g., National Radio Astronomy Observatory)

*Programs are
the
implementation
arm of NSF.*

What is a Program Director?

- Programs are the “implementation arm” of NSF.
- Program Directors oversee the National Science Foundation’s “gold standard” merit review process.

Program directors have the opportunity to be involved with a broad spectrum of national scientific programs and initiatives that ultimately increase intellectual awareness and enhance professional growth.

What are the main responsibilities of a Program Director?

- Manage the proposal review process.
 - Form and facilitate merit review panels
 - Consider volunteering to serve on a panel.



What are the main responsibilities of a Program Director?

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 - Consider volunteering to serve on a panel.
 - Inform yourself about the process!



What is NSF's Merit Review Process?

- A panel of external and internal subject matter experts reviews proposals
 - The great majority of NSF proposals are peer-reviewed either by ad hoc mail reviewers (~10%), panel committee (~50%) or both (32%)

NSF receives approximately 40,000 proposals each year for research, education and training projects, of which approximately 11,000 are funded.

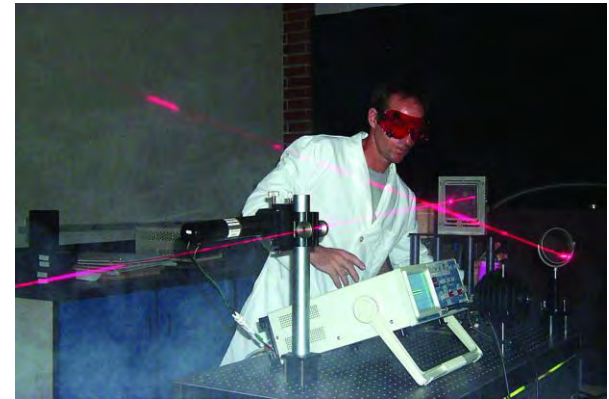
NSF Merit Review Process



Proposal Review Criterion I:

Intellectual Merit

- Potential to advance knowledge and understanding within and across fields
- Qualification of investigators
- Creativity and originality
- Conceptualization and organization
- Access to resources



Proposal Review Criterion II:

Broader Impacts

- Advancement of discovery and understanding while promoting teaching, training, and learning
- Participation of underrepresented groups
- Enhancement of infrastructure for research and education
- Dissemination of results to enhance scientific and technological understanding
- Benefits to society



Advances In Biological Informatics

- Methods, tools and data resources for the capture, representation, and analysis of biological phenomena in digital form.
- Award categories:
 - Innovation Awards – smaller, shorter projects, emphasis on innovative, high risk research leading to new approaches or methods.
 - Development Awards – larger efforts focused on delivery of a database, software tool or informatics resource.
- Contacts
 - Anne Maglia (amaglia@nsf.gov)
 - Peter McCartney (pmccartn@nsf.gov)
 - Julie Dickerson (jdickers@nsf.gov)

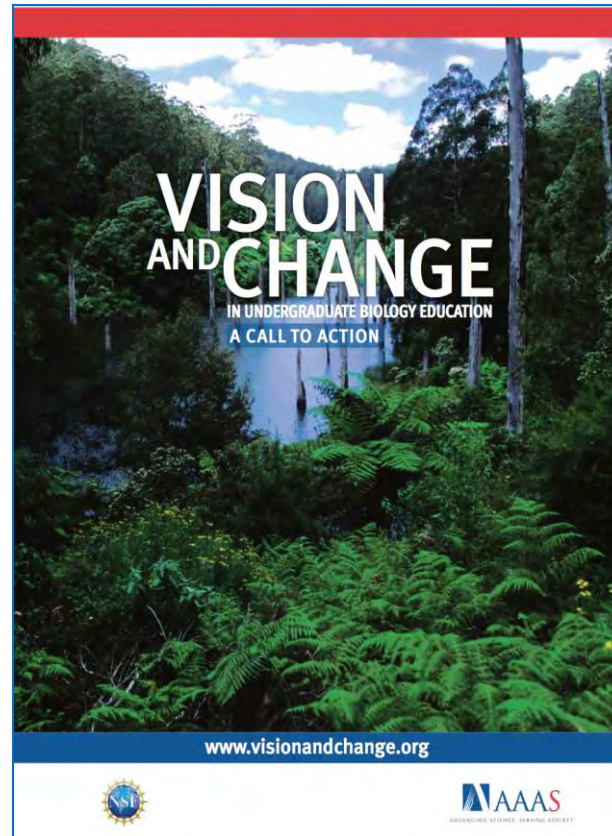
Major Research Instrumentation (MRI)

- January deadline
- \$100K- \$4 X 10⁶
- 30% cost share (non-federal source)
- Acquisition and/or development
- NSF-wide, cross-cutting
- Current PO Dr. Vicki Martin
- **Mandatory data management plan**

Instrument Development for Biological Research (IDBR)

- 4th Thursday in July deadline
- Research instrumentation (gizmo test)
- No cost share, no fixed limits on size of the award
- Innovation (Type A) or Bridging (Type B)
- In BIO
- **Mandatory data management plan**
- Current PO Dr. Cort Anderson

Vision and Change in Undergraduate Biology Education



Full Report available through: <http://visionandchange.org/>

- NSF 09-598: Research Experiences for Undergraduates (across all NSF Directorates)
- NSF 10-544: Transforming Undergraduate Education in STEM (formerly CCLI) (BIO/EHR)
- NSF 11-531: Research Coordination Networks- Undergraduate Biology Education (BIO/EHR)

Postdoctoral Research Fellowships in Biology (PRFB)

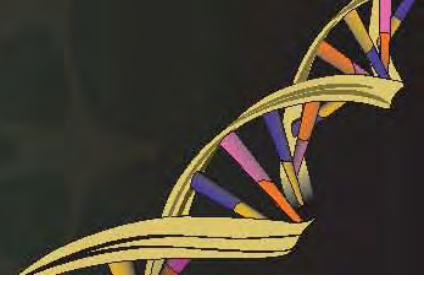
Division of Biological Infrastructure (DBI)

- Broadening Participation in Biology
- Intersections of Biology and Mathematical and Physical Sciences
- National Plant Genome Initiative Postdoctoral Research Fellowships

These areas change periodically as new scientific and infrastructure opportunities present themselves; and Program Solicitation will be changed as necessary to reflect the areas being funded.



Plant Genome Research Program



- Started as part of the National Plant Genome Initiative (NPGI) in 1998
- Major focus is on plants of agricultural importance and plant processes of potential agronomic value
- Emphasis on the development and use of genomics tools and resources to address previously intractable questions in plant biology on a genome-wide scale
- Research areas include structural genomics, functional genomics, bioinformatics, databases and tool development
- Training and outreach activities are built into all projects
- Rapid release and sharing of all data and tools is required

Areas of Opportunity Supported

- Genome-Enabled Plant Research: projects to address major unanswered questions in plant biology not tractable using traditional approaches alone
- Tools and Resources for Plant Genome Research: development of novel tools and resources addressing a specific problem or unmet need
- Special focus areas in past: Heterosis Challenge Grants, Comparative Plant Genome Sequencing, and Improving Plant Genome Annotation,

!New for the FY 12 Competition

Mid-Career Investigator Awards in Plant Genome Research

Mid-Career Investigator Awards in Plant Genome Research (MCA-PGR)

To increase participation of mid-career investigators primarily trained in fields other than plant genomics. Especially encouraged are proposals from investigators trained in plant physiology or plant biochemistry. Mid-career investigators trained in genomics of non-plant systems, informatics, and other disciplines that are critical to advancing the field of plant genome research (engineering, mathematics/statistics, physiology and quantitative genetics), are also encouraged to apply.

PGRP Target Date: March 5, 2012

Basic Research to Enable Agricultural Development

BREAD



BILL & MELINDA
GATES *foundation*

BREAD is a program jointly supported by NSF and the Bill & Melinda Gates Foundation (BMGF) that seeks to provide funds for innovative basic scientific research designed to address key constraints to smallholder agriculture in the developing world.

Key Criteria for BREAD Projects

- Scientific excellence with focus on transformative basic research at the proof-of-concept stage rather than development or downstream application
- Clear relevance to constraints faced by small-holder farmers in the developing world
- Meaningful and synergistic partnerships
- **Clear evidence of innovative approaches**
High risk is OK if potential benefit is also high. Think out of the box!!

Stay tuned for information regarding future competitions!



National Plant Genome Initiative Postdoctoral Research Fellowships

Sponsored by NSF, DOE, and USDA/ARS, the NPGI fellowships will allow the recipients to focus their studies in plant genomics with an emphasis on quantitative genetics, modern breeding approaches, and bioinformatics.

Deadline Oct. 11, 2011
and every second Tuesday annually thereafter

Other possibilities

- REU (supplement)
- Career Awards
- Workshop Awards
- Co-funding

Suggestions for successful NSF proposals

- **Read the solicitation—several times**
- Consult with the Program Officer at an early stage
- Inform yourself about the process
- Understand that it is likely to be an iterative process

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Identify the appropriate program

The screenshot shows a web browser window displaying the NSF website. The browser's address bar shows the URL `http://nsf.gov/funding/pgm_summ.jsp?pims_id=13360`. The page content includes a notice about unsolicited proposals, a link to the program's parent category, and a link to recent awards, which is circled in red. Other links include 'Map of Recent Awards Made Through This Program', 'News', and 'Discoveries'. The footer contains contact information for the NSF and a 'Last Updated' date of June 17, 2011.

nsf.gov - Funding - Catalysis and Biocatalysis - US National Science Foundation (NSF) - Windows Internet Explorer

http://nsf.gov/funding/pgm_summ.jsp?pims_id=13360

File Edit View Favorites Tools Help

Electronic Jacket nsf.gov - Funding - Catal...

Unsolicited proposals received outside of the Announced Proposal Window dates will be returned without review.

THIS PROGRAM IS PART OF

[Chemical, Biochemical, and Biotechnology Systems](#)

[What Has Been Funded \(Recent Awards Made Through This Program, with Abstracts\)](#)

[Map of Recent Awards Made Through This Program](#)

[News](#)

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The National Science Foundation, 4201 Wilson Boulevard, Arlington, Virginia 22230, USA
Tel: (703) 292-5111, FIRS: (800) 877-8339 | TDD: (800) 281-8749

Last Updated: June 17, 2011
[Text Only](#)

Local intranet 100%

NSF Workforce

- Consists of
 - 1,200 career employees;
 - 150 scientists from research institutions on temporary duty;
 - 200 contract workers; and
 - staff of the NSB office and the Office of the Inspector General.
- Unlike other agencies, NSF does not maintain its own research laboratories.