



How to get NSF to Support Your Research

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Outline

- Basics of NSF
- NSF
 - Current realities
 - Trends and opportunities
- Review Process
- How to get your dreams fulfilled

Why go to NSF?

- NSF provide grants (not cooperative agreements or contracts)
- NSF pays full overhead
- NSF supports curiosity-driven research

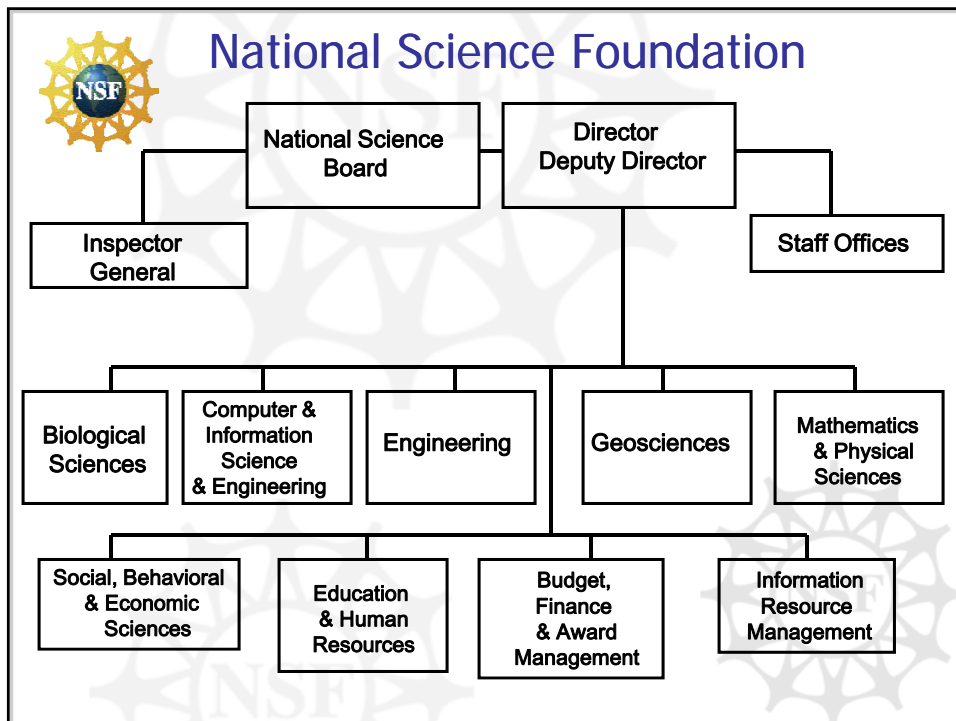


NSF in a Nutshell

- Independent Agency
- Supports basic research & education
- Uses grant mechanism
- Low overhead; highly automated
- Discipline-based structure
- Cross-disciplinary mechanisms
- Use of Rotators/IPAs
- National Science Board

NSF's future?

- Long-term broad support (doubling authorization passed)
- NSF exempted from "freeze"





Key Documents

- Grant Proposal Guide (January 2010)
http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg/
- When in doubt –
 - <http://www.nsf.gov/>



Sources of Information

- Web: www.nsf.gov
- National Science Foundation Update (formerly MyNSF)
- Grant Proposal Guide
http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg
- Program Officer(s)
- Colleagues*

Trends

- Increasing inter-directorate cooperation
- Increasing support for interdisciplinary projects
- Support for environmental research

Interdisciplinary Opportunities

- Standard Proposals with a Co-Review Request
- Program: Dynamics of Coupled Human and Natural Systems
- Incentive: Environment, Society, and Economics
- Continuing "climate research initiative"

Dynamics of Coupled Human and Natural Systems

- http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13681&org=BCS
- First permanent multi-directorate program
- GEO has joined BIO and SBE
- \$2,000,000 awards



Two Criteria for Funding

- Intellectual merit
- Broader impacts



Intellectual Merit?

- NSF funds basic research
- NSF funds basic research
- Intellectual merit means increasing knowledge through developing and examining basic theories or methods



Broader Impacts

- Promote teaching, training and learning
- Broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)
- Enhance the infrastructure for research and education, such as facilities, instrumentation, networks and partnerships
- Disseminate results broadly to enhance scientific and technological understanding
- Benefit society



Start with

<http://www.nsf.gov>

- Check previous program awards
Award Search:
<http://www.nsf.gov/awardsearch/>
- Read RFA carefully (if not standard competition)
- Download *Grant Proposal Guide*



Timing of Proposal Submission

- No deadlines
- Submission windows
- Deadlines
- Preliminary proposals
- Target dates



Sections of an NSF Proposal

- Cover Sheet
- Project Summary (one page)
- Table of Contents
- Project Description (15 pages max)*
- References Cited
- Biographical Sketch(es)*
- Budget
- Current & Pending Support
- Facilities, Equipment & Other Resources
- Special Information & Supplementary Documentation*



Put Together the Proposal

- Identify intellectual merit (theoretical contribution)
- Describe in as much detail as possible exactly what you want to do
- Make sure your research team has appropriate capabilities
- Describe broader impacts
- Decide where to submit (co-review?)
- E-mail or call appropriate program officer with specific questions



Budgetary Guidelines

- Amounts
 - Reasonable for work - Realistic
 - Well justified - Needs are established
 - In-line with program guidelines

- Eligible costs
 - Personnel (2 months max)
 - Equipment
 - Travel
 - Participant Support
 - Other Direct Costs (including subawards, consultant services, computer services, publication costs)



Getting Support in Proposal Writing

- NSF Publications
 - Program Announcements/
Solicitations
 - Grant Proposal Guide
 - Web Pages
 - Funded Project Abstracts
 - Reports, Special Publications
- Program Officers
 - Incumbent
 - Former "Rotators"
- Mentors on Campus
- Previous Panelists
- Serve As Reviewer
- Sponsored Research Office
- Examples of Successful Proposals



Faculty Early Career Development Program--CAREER

- Highly competitive (“walk on water”) for SBE
- Not the “bar exam” model
- Serious education component
- Not team project
- 5-year, \$400K
- RFA under review



Rapid Response Research (RAPID)

- \$200,000 maximum, 1-year awards
- Urgent as data are ephemeral
- 5-page project description
- Quick turnaround review
- Contact Program Officer before submitting

EARly-concept Grants for Exporatory Research (EAGER)

- Untested, but potentially transformative ideas (high-risk, high-payoff)
- \$300,000 maximum and up to 2 years
- Eight page project description
- Quick turnaround review
- Contact Program Officer before submitting

Review Process (DRMS)

- Receive the jacket
 - Subject appropriateness review
 - Compliance check
- Request reviews
 - *Six ad hoc*
 - Two panel members
- Panel(s) recommendation(s)
- Program Officer funding decision



Doctoral Dissertation Improvement Awards

- Archaeology
- Cognitive Neuroscience
- Cultural Anthropology
- Decision, Risk & Management Science
- Geography & Regional Science
- Law and Social Science
- Linguistics
- Physical Anthropology
- Political Science
- Science and Technology Studies
- Societal Dimensions of Engineering, Science, and Technology
- Sociology
- Economics
- Human Cognition and Perception
- Methodology, Measurement, & Statistics



NSF Sources of Reviewers

- Program Officer's knowledge
- References listed in the proposal
- Google
- Community of Science and other databases
- Reviewer's recommendations
- Investigator's suggestions



Funding Decisions

- ➔ Program Officer decision
- ➔ Feedback to PI
- ➔ Informal and formal notification
- ➔ Scope of work and budget discussions



Myths about NSF

- ➔ Only funds scholars at elite graduate institutions
- ➔ Only funds “famous” academics
- ➔ Once declined, you are likely always to be declined
- ➔ Only funds “normal science”
- ➔ Advisory committees make funding decisions



Reasons for Declinations

- “Trust-me” proposal
- Not feasible
 - Expertise gaps
 - Insufficient funding
 - Too ambitious
- Incremental contribution
- Bad luck



NSF vs. NIH

- NSF tends to be smaller
- NSF is more open to risky, exploratory, paradigm-challenging work
- NSF stresses basic research
- NSF has no scoring system, percentile system
- NSF program officers make funding decisions
- NSF uses “revision encouragement” loosely



Advice

- Learn to love rejection
- Team up
- E-mail or call Program Officer with specific questions
- Encourage dissertation improvement grant proposals (check program first)



Useful to submit even if declined

- Revise and resubmit
- Discover other funding sources
- Forces thinking
- Build relationships
- Receive reviews from experts



QUESTIONS??

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