Dr. Jessica Robin, PEER Program Director, National Science Foundation

PEER PROGRAM OVERVIEW

History, Purpose, Significance & Future
With an annual budget of over $7 billion, the National Science Foundation has a mandate to support all fields of basic science and engineering, as well as research into STEM education. Because of this comprehensive commitment to science, NSF has helped keep our nation at the forefront of scientific discoveries for more than six decades, and those discoveries have had worldwide impact.

**Graduate Research Opportunities Worldwide (GROW)** enables Graduate Research Fellows to work with university faculty and researchers across the globe.

- Total countries partnered with = 22

**Science Across Virtual Institutes (SAVI)** facilitates partnerships among NSF-supported U.S. scientists and engineers and their international partners for enhanced research collaboration, data sharing, networking, and technical exchanges.

- Total countries partnered with = about 19

**Partnerships for Enhanced Engagement in Research (PEER)** is a USAID-funded program that provides opportunities for scientists in developing countries to work with NSF-funded scientists at U.S. institutions.

- 98 projects in 42 countries

**Basic Research to Enable Agricultural Development (BREAD)** is an NSF partnership with the Bill & Melinda Gates Foundation to support innovative basic research addressing constraints to smallholder agriculture in the developing world.

- Total countries partnered with = 17

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**National Science Foundation**

**NATIONAL MISSION, INTERNATIONAL IMPACT**

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**NSF Compared to Worldwide Funding by Government Agencies**

- Australia
- Brazil
- Canada
- China
- France
- Germany
- Japan
- Korea
- Russia
- UK
- USA

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**Nobel Prizes**

COLLECTIVELY, NSF-FUNDED RESEARCHERS HAVE WON MORE THAN 210 NOBEL PRIZES FOR WORK IN THE FIELDS OF CHEMISTRY, ECONOMICS, PHYSICS AND PHYSIOLOGY AND MEDICINE SINCE 1951.

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**Merit Review**

THE NSF MERIT REVIEW PROCESS IS CONSIDERED THE INTERNATIONAL GOLD STANDARD FOR EVALUATING SCIENCE AND ENGINEERING RESEARCH PROPOSALS

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* Source: Approximations based on FY2015, or most recent fiscal year, budget reported by each research agency
Research proposals submitted to NSF are subjected to a rigorous merit review system – impartial, competitive, and transparent – ensuring that each proposal meets the highest standards of intellectual merit and broader impact on society. NSF’s merit review process is widely regarded as the gold standard of scientific review and has been emulated in numerous countries around the world.

**INPUT**
- 50,000 Proposals evaluated through competitive review process
- 38,000 Reviewers, including external experts and program staff
- 233,000 Total number of reviews, each proposal evaluated multiple times

**OUTPUT**
- $7.3 billion NSF FY 2015 Budget Request
- 94% Funds research, education and related activities
- 10,800 Competitive awards funded
- 1,922 U.S. colleges, universities, and other institutions receiving NSF funding
- 299,000 Estimated number of researchers, postdoctoral fellows, trainees, teachers and students NSF supports directly

**IMPACT**
- 47,800 Students supported by NSF Graduate Research Fellowships since 1952
- 210+ Number of Nobel Laureates supported by NSF
- NSF-Supported Research has spurred economic activity and improved the quality of life for all Americans
- STEM Workforce Development supports students, teachers and tools to enable the development of a diverse and highly qualified science and technology workforce

Data Current as of 2014

*Figures other than Budget Request represent FY 2013 actuals*
In a changing world full of opportunity, multidisciplinary research and international cooperation in science are more important than ever. With major scientific collaborations in all corners of the world, NSF continues to oversee global scientific exchanges and lead U.S. participation in international scientific efforts. We can only imagine what new discoveries this innovation and collaboration will spark in the years to come.

Data Current as of 2014
SYNERGY BETWEEN NSF & USAID

**NSF**
- Congressional mandate is **scientific research**
- Primary client is the **US science community**
- Funding is allocated to **US institutions**
- **Merit review** for research proposals is fundamental

**USAID**
- Congressional mandate is **foreign assistance**
- Primary clients are **developing countries**
- Funding flows to **foreign partner** and/or US institution
- Bureaus, regions, and missions need **buy-in**
• U.S. scientific community advocated for resources to balance partnerships with their international collaborators

• Prior jointly supported activities

  • Supporting Infrastructure Reconstruction (Haiti)
  • Geospatial Technologies & Biodiversity (Kenya)
  • Climate 1-Stop Geoportal (Panama)
  • Earthquake Monitoring (Malawi)
  • Recession of Tropical Glaciers (Peru)
  • Geophysical Hazards Workshop (Costa Rica)
• Unique access to facilities and sites
• Strengthens collaborations between U.S. and international researchers
• Workforce development
NSF remains on the leading edge of discovery in areas from astronomy to geology to zoology. As Vannevar Bush forecast at NSF’s inception: “The pioneer spirit is still vigorous within this nation. The rewards of such exploration both for the nation and the individual are great. Scientific progress is one essential key to our security as a nation, to our better health, to more jobs, to a higher standard of living, and to our cultural progress.”

FIGHTING FUTURE FOREST FIRES
UNLOCKING THE BRAIN’S MYSTERIES
SAVING LIVES ON A RESTLESS PLANET

PROTECTING PASSWORDS WITH ADVANCED ALGORITHMS
DNA FINGERPRINTING
INVOLVING CITIZEN SCIENTISTS IN TOMORROW’S DISCOVERIES
EDUCATING TOMORROW’S HIGH-TECH TEACHERS