Dr. France A. Córdova
Director, National Science Foundation

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

PEER PROGRAM
CONNECTING YOUR RESEARCH WITH NSF SUPPORTED RESEARCH

Map of Americas
Adapting to a World without Glaciers
Hydrologic Transformation and Human Resilience to Climate Change in the Peruvian Andes
Glacial Retreat and Water Resource Sustainability in the Peruvian Andes: Informing Adaptation Strategies through Collaborative Science

PI: Cirilo Pablo Lagos, Instituto Geofísico de Perú
U.S. Partner: Bryan Mark, Ohio State University
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.

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

<table>
<thead>
<tr>
<th>Country</th>
<th>Funding (Billion dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>1</td>
</tr>
<tr>
<td>Brazil</td>
<td>0.5</td>
</tr>
<tr>
<td>Canada</td>
<td>0.5</td>
</tr>
<tr>
<td>China</td>
<td>2</td>
</tr>
<tr>
<td>France</td>
<td>1.5</td>
</tr>
<tr>
<td>Germany</td>
<td>4.5</td>
</tr>
<tr>
<td>Japan</td>
<td>3</td>
</tr>
<tr>
<td>Korea</td>
<td>2.5</td>
</tr>
<tr>
<td>Russia</td>
<td>0.5</td>
</tr>
<tr>
<td>UK</td>
<td>5</td>
</tr>
<tr>
<td>USA</td>
<td>7</td>
</tr>
</tbody>
</table>

### NSF Beyond Borders

- **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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* Source: Approximations based on FY2015, or most recent fiscal year, budget reported by each research agency

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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.**

### Merit Review

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

- 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

Figures other than Budget Request represent FY 2013 actuals

Data Current as of 2014
Total R&D by Agency, FY 2014
budget authority in billions of dollars

Total R&D = $144.2 billion

- DOD, $69.6
- HHS (NIH), $32.0
- DOE, $12.7
- NASA, $11.6
- NSF, $6.2
- USDA, $2.5
- Commerce, $2.7
- All Other, $6.7

Source: OMB R&D data, agency budget justifications, and other agency documents.
R&D includes conduct of R&D and R&D facilities.
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NSF Office of the Director

- Office of International and Integrative Activities (OIIA)

NSF Directorates

- Biological Sciences (BIO)
- Computer and Information Science and Engineering (CISE)
- Education and Human Resources (EHR)
- Engineering (ENG)
- Mathematical and Physical Sciences (MPS)
- Geosciences (GEO)
- Social, Behavioral and Economic Sciences (SBE)
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.
• Intellectual partnerships and mutual benefit are clear

• U.S. students and junior researchers are engaged internationally

• Global networks linking expertise and resources are common
• Unique access to facilities and sites
• Strengthens collaborations between U.S. and international researchers
• Workforce development
National Science Foundation

PUSHING THE FRONTIER FORWARD

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

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.”
Science Across Virtual Institutes (SAVI)

- SAVI provides a platform for teams of NSF-funded investigators to network with partners abroad, leverage resources to advance shared research interests, and engage students in international collaboration.

- SAVI is a mechanism, not a stand-alone program.