Partnerships for International Research and Education (PIRE) A Model of International Scientific Collaboration

Research Foundation of the City University of New York
Office of Award Pre-Proposal Support
June 10, 2016

Agenda for Meeting

10:00 am-Breakfast

10:30 am-Welcoming Remarks and Introductions

10:45 pm-PIRE Program Overview

11:45 am-Break

12 noon-Questions and Answer Period and Open Discussion

1 pm-End of Meeting

What is PIRE?

- PIRE stands for Partnerships for International Research and Education

- PIRE's primary purpose is to a**d**vance international S&E collaborations in both research and education across all S&E disciplines

- PIRE supports excellence in S&E research and education through these international collaborations

- PIRE engages US and foreign PIs to share resources and research infrastructure within and across institutions to build strong partnerships

- PIRE provides opportunities for US students and early career researchers to participate in substantive international research experiences

What type of PIRE projects is NSF looking to support?

- Projects with a transformative research component

- Projects with a well integrated educational component

- Projects that leverage financial and human resources between multiple domestic and multiple international partners

- Projects with reciprocal research and educational components between US and foreign collaborators

- Projects that understand and address the challenges and complexities of international scientific partnerships

How PIRE was conducted in the 2015 Competition

- Proposals reviewed by 7 panels-Biological Sciences, Geosciences, Computer Sciences, Engineering, Social Sciences, Math and Physical Sciences, Education

- OISE had leadership for organizing and managing, the proposal review process, outreach and communication, and post-award activity

- OISE managed the coordination with the NSF PIRE Coordinating Committee (PCC) and with PIRE counterpart organizations

- PCC and external foreign/domestic partners provided names of reviewers and panelists for proposals in respective disciplines and countries and attended panels

- In consultation with PCC and external partners OISE made award recommendations, negotiated U.S. budgets, and made awards (OISE was responsible for US budgets and counterpart organizations were responsible for their budgets)

How PIRE was Conducted in the 2015 Competition (cont'd)

Evaluation Criteria
>Quality of Science (Intellectual Merit and Broader Impacts)-required by NSF
>Quality of Educational Activities-PIRE specific
>Value Added and Strength of International Partnership-PIRE specific
>Institutional Engagement-PIRE specific
>Project Management-PIRE specific

Conflict of Interest
>NSF Conflict of Interest Rules apply. If there was a difference between NSF and external partner's COI rules the more restrictive rules apply.

Confidentiality
>NSF Confidentiality rules apply. All information on PIRE proposals, reviews, rankings, review analyses were shared with partners who signed a confidentiality agreement

How PIRE was Conducted in the 2015 Competition (cont'd)

Budget

    OISE contributed $61.5 million for US institutions over 5 years

    Foreign partners contributed funding to the foreign institutions/collaborators

    NSF Research Directorates provided co-funding at their discretion-$7.7 million

Number of Proposals and Awards

    228 preliminary proposals

    63 invited proposals (59 actually submitted)

    17 awards were made

    Average award size-Approximately $4.5 million

Respective Administrative and Budgetary Responsibilities

    NSF was responsible for all costs associated with administration and review

    of proposals submitted to NSF-any additional costs required in connection with

    components of proposals submitted to foreign partners were assumed by them

Cohort 5 PIRE Awards

ENGINEERING

Aluru-Active materials in chemical fuel production-$4.3 million

Aguilar-Synthesis of optical materials-Brody-Coastal flood risk reduction -$3.6 million

Kim-Advanced artificial muscles in soft robotics-$3.8 million

Vikesland-Halting environmental antimicrobial resistance-$3.3 million

GEOSCIENCES

Garzione-Dust flux from desert sources and its impact on climate change-$4.2 million

Anagnostou-Taming water in Ethiopia-$4.3 million

Joseph -Building extreme weather resiliency and global community resiliency-$4.5 million

Kohn-Tracing the cycle of rocks and fluids in the fossil subduction zone of Europe-$4 million

MATHEMATICS AND PHYSICAL SCIENCES

Kasliwal-Studying short-lived cosmic transients and near-earth asteroids-$4.5 million

Composto-Active coatings technologies for the human habitat-$3.5 million

BIOLOGICAL SCIENCES

Hanley-Cassava mosaic disease-insect-transmitted plant virus pathosystems-$5 million

Yoon-International Program for the advancement of neurotechnology-$5 million

SOCIAL, BEHAVIORAL, and ECONOMIC SCIENCES

Miller-Neural mechanisms of reward and decision-$3.8 million

Kroll-Translating cognitive and brain science to language learning environments-$5 million

Orttung-Promoting Urban Sustainability in the Arctic-$3 million

EDUCATION

Optimal Learning in Science Environments-$3.6 million

Number of PIRE5 Awards by Discipline

Engineering	– 5
Geosciences	– 4
Social Sciences	– 3
Math/Physical Sciences	– 2
Biological Sciences	– 2
Education	– 1
Total	–17

Co-Funding from EPSCOR and disciplines~$7 m
8-awards are eligible for PEER funding
4 female PIs
2 URMs

Global Reach of PIRE 5 Awards

China-3
France-3
Germany-5
India-2
Italy-2
Japan-3
Mexico-2
Netherlands-2
South Korea-4
Spain-2
Sweden-2
Switzerland-2
Taiwan-2
United Kingdom-3

Brazil-1
Canada-2
Chile-1
Colombia-1
Egypt-1
Ethiopia-1
Finland-1
Israel-1
Kenya-1
Norway-1

Phillipines-1
Poland-1
Portugal-1
Russia-1
Singapore-1
Tanzania-1
Turkey-1

Estimated Timeline for Next PIRE Competition

December 2015   Solicitation and Management plan presented for internal NSF review
June 2016   Solicitation Announced on NSF Website
July 2016   Outreach and Webinars
September 2016 Deadline for Preliminary Proposal Submissions
October 2016   Preliminary Proposal Panels
November 2016   Invite/Not Invite Decisions
March 2017   Full Proposal Submission Deadline
April 2017   Full Proposal Review Panels
May 2017   Schedule Meetings with PCC and Partnering Organizations
                finalize budgets, and make award recommendations
June 2017   Announce Awards

PIRE Program Evaluation

- The PIRE program appears to foster international collaboration by U.S. scientists and engineers

- PIRE participants are more likely than others who engage in single-award funded international collaborations to continue collaborating internationally after the end of the award

- Early career scientists benefit from PIRE through increased research productivity

- Postdocs in PIRE see an increase, on average, in the impact of their research, as measured by citations of published journal articles.

PIRE Evaluation Recommendations

- Collect information about PIRE (and other program) participants more systematically

- Consider mechanisms to alleviate administrative burden on PIs by requiring PIRE projects to fund a project administrator to help manage the projects and thus allow the PIs to focus on the research agenda of the award

- Facilitate funding and support for foreign investigators participating in PIRE

- Identify best practices at U.S. institutions for minimizing barriers to student research abroad

http://abtassociates.com/AbtAssociates/files/54/541407a8-485e-4f5d-8697-bb17542544e8.pdf

Preparing Your PIRE Preliminary Proposal

- 1. Cover Sheet: Budget $2 is the requested amount
      Check International Activities Box and select appropriate
      countries from the drop down list
- 2. Project Summary: Very Important (1 page maximum) Describe concept, intellectual merit, and broader impact. You are writing to a broad scientifically literate audience
- 3. Table of Contents-automatically generated in FastLane
- 4. Project Description: (6 pages maximum) Outlines research, breakthroughs being sought, and benefits and reasons for the international collaboration (expertise, facilities, resources, phenomena)
      Administrative Summary (1 page maximum), Research Summary (3 pages
      maximum), Education Summary (2 pages maximum)
- 5. References Cited: NSF GPG Instructions
- 6. Biographical Sketches: PI, CoPIs, key domestic and international partners-GPG

Preparing Your PIRE Proposal (cont'd)

- 7. Conflicts of Interest Information: Document listing all individuals in item 6 and individuals they have a conflict with
  - Conflicts are defined as:
    - current, previous (12 mos.) or possible future employment at lead or partner institution
    - thesis advisor or student relationship
    - co-author of paper, project collaborator within past 48 months
    - family member or close friend

- 8. Supplemental Documents: Official letters of commitment not needed at preliminary proposal stage but informal evidence is needed.
  NOTE: Partnerships cannot be changed if invited to submit full proposal

- 9. Optional Reviewer Information: List of Suggested Reviewers, List of Suggested Non-Reviewers (brief explanation why should not review), submitted under single copy documents section

Tips on Preparing Your PIRE Proposal

- Build on your existing Foreign Collaborators and Partners

- Project Summary needs to be, clear, comprehensive, and written in the third person. It should contain an overview statement, an intellectual merit statement, a broader impacts statement, and a conclusion (this is where your proposal needs to get noticed)

- Make sure that you have a significant reciprocal educational component that includes graduate students and undergraduate students (mostly graduate students)

- Make sure the letters of commitment (or evidence thereof) from the foreign institutions are strong with specific contributions of support (institutional and staff commitments)

- Make a strong statement about CUNY and the role it has played in supporting women and underrepresented minorities and how it will provide opportunities to them in this project (URM are also underrepresented in international collaborations)

- Make use of tables and charts to convey the complexity of your project