Catalyzing New International Collaborations (CNIC)

PROGRAM SOLICITATION
NSF 12-573

REPLACES DOCUMENT(S):
NSF 11-508

National Science Foundation

Office of International and Integrative Activities

Full Proposal Deadline(s) (due by 5 p.m. proposer's local time):

Proposals Accepted Anytime

Applicants are advised to submit proposals at least nine months prior to the expected date of the proposed activity.

IMPORTANT INFORMATION AND REVISION NOTES

A revised version of the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG), NSF 13-1, was issued on October 4, 2012 and is effective for proposals submitted, or due, on or after January 14, 2013. Please be advised that the guidelines contained in NSF 13-1 apply to proposals submitted in response to this funding opportunity.

Please be aware that significant changes have been made to the PAPPG to implement revised merit review criteria based on the National Science Board (NSB) report, National Science Foundation's Merit Review Criteria: Review and Revisions. While the two merit review criteria remain unchanged (Intellectual Merit and Broader Impacts), guidance has been provided to clarify and improve the function of the criteria. Changes will affect the project summary and project description sections of proposals. Annual and final reports also will be affected.

A by-chapter summary of this and other significant changes is provided at the beginning of both the *Grant Proposal Guide* and the *Award & Administration Guide*.

Please note that this program solicitation may contain supplemental proposal preparation guidance and/or guidance that deviates from the guidelines established in the Grant Proposal Guide.

Revision Notes:

This publication updates and replaces NSF 11-508, Catalyzing New International Collaborations (CNIC). The previous CNIC accepted proposals for workshops to initiate new international research collaborations. The new CNIC program will no longer support this type of workshop. Such workshop proposals should be submitted to the appropriate disciplinary program and according to *NSF Proposal & Award Policies & Procedures Guide*. OISE will continue to accept workshop proposals that focus on international issues in science and engineering research and education as unsolicited proposals. The present program is an international travel grant program in support of research activities with focus on initiating new international research collaborations (new to the investigator). Eligible proposers include all career stages. Maximum project duration is 12 months.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Catalyzing New International Collaborations (CNIC)

Synopsis of Program:

The Catalyzing New International Collaborations program supports the participation of U.S. researchers and students in activities intended to catalyze new international collaborations.

Cognizant Program Officer(s):

Please note that the following information is current at the time of publishing. See program website for any updates to the points of contact.

- R. Clive Woods, telephone: (703) 292-8710, email: OISE-CNIC@nsf.gov

Applicable Catalog of Federal Domestic Assistance (CFDA) Number(s):

- 47.041 --- Engineering
- 47.049 --- Mathematical and Physical Sciences
- 47.050 --- Geosciences
- 47.070 --- Computer and Information Science and Engineering
- 47.074 --- Biological Sciences
- 47.075 --- Social Behavioral and Economic Sciences
- 47.076 --- Education and Human Resources
- 47.079 --- International and Integrative Activities (IIA)
- 47.081 --- Office of Experimental Program to Stimulate Competitive Research

Award Information

Anticipated Type of Award: Standard Grant

Estimated Number of Awards: 30 to 40 per year

Anticipated Funding Amount: $2,000,000 per year, pending the quality of proposals and availability of funds

Eligibility Information

Organization Limit:

> The categories of proposers eligible to submit proposals to the National Science Foundation are identified in the Grant Proposal Guide, Chapter I, Section E.

PI Limit:

> None Specified

Limit on Number of Proposals per Organization:

> None Specified

Limit on Number of Proposals per PI:

> None Specified

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- **Letters of Intent:** Not Applicable

- **Preliminary Proposal Submission:** Not Applicable

- **Full Proposals:**
    - Full Proposals submitted via FastLane: NSF Proposal and Award Policies and Procedures Guide, Part I: Grant Proposal Guide (GPG) Guidelines apply. The complete text of the GPG is available electronically on the NSF website at: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg.
    - Full Proposals submitted via Grants.gov: NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov Guidelines apply (Note: The NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide)

B. Budgetary Information

- **Cost Sharing Requirements:** Inclusion of voluntary committed cost sharing is prohibited.

- **Indirect Cost (F&A) Limitations:** Not Applicable

- **Other Budgetary Limitations:** Other budgetary limitations apply. Please see the full text of this solicitation for further information.

C. Due Dates

- **Full Proposal Deadline(s)** (due by 5 p.m. proposer's local time)**:**

    Proposals Accepted Anytime

    > Applicants are advised to submit proposals at least nine months prior to the expected date of the proposed activity.

Proposal Review Information Criteria

Merit Review Criteria: National Science Board approved criteria. Additional merit review considerations apply. Please see the full text of this solicitation for further information.

Award Administration Information

Award Conditions: Standard NSF award conditions apply.

Reporting Requirements: Standard NSF reporting requirements apply.

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I. INTRODUCTION

The Catalyzing New International Collaboration (CNIC) program is designed to promote professional development of U.S. STEM researchers and to advance their research through international engagement.

Support of international activities is an integral part of NSF's mission to sustain and strengthen the nation's science, technology, engineering, and mathematics (STEM) capabilities. NSF recognizes the importance of enabling U.S. researchers and educators at every career level to advance their work through international collaboration and of helping to ensure that future generations of U.S. scientists and engineers gain professional experience beyond the nation's borders early in their careers.

Grants from the Office of International Science and Engineering (OISE) contribute to NSF's mission by supporting research and education activities that present unique opportunities and offer potentially high benefits through collaboration with scientists and engineers abroad. NSF will consider proposals from U.S. institutions for collaborative work with any country that is not explicitly proscribed by the Department of State. Activities can be in any field of science and engineering research and education supported by NSF.

This solicitation offers support for the initial phases of an international collaboration with the strong expectation that the next phase will involve submission by U.S. investigators of a follow-on proposal to an NSF Directorate for continued funding of the research initiated with the CNIC grant.

To facilitate this end, prior to submission in response to this solicitation, it is required that PIs establish communication with the cognizant Program Officer in the NSF Division to which the follow-on proposal would be submitted. Alternatively, PIs may contact the CNIC Program Director who will consult with the appropriate program director on behalf of the proposer. In either case, the PI should provide a brief description of proposed activities (one page max). Disciplinary Program Officers or the CNIC Program Director will advise potential proposers if the proposed international collaboration activity should be submitted to CNIC or to other existing programs as a regular proposal, a supplement, or an EAGER. A copy of this message must be included in the CNIC proposal (see Section V.A. 5 below).

It should be noted that encouragement of submission from NSF does not in any way guarantee funding of the CNIC proposal or any subsequent proposals submitted to disciplinary programs to continue research initiated by the support of CNIC. Rather, it helps OISE to know that the proposed international collaborative research is within the scope of a disciplinary research program, and therefore OISE's support for the international collaborative part of the project will add value to the advancement of the field in addition to the inherent value of international collaboration. In addition, PIs are encouraged to contact the cognizant OISE country Program Officer prior to submission to this solicitation to discuss issues that are unique to the country where the proposed research collaboration is to take place. (For a list of OISE Program Officers by country, see http://www.nsf.gov/od/oise/country-list.jsp.)

II. PROGRAM DESCRIPTION

Scope and Focus

The CNIC program will support U.S. researchers' participation in activities intended to catalyze **new** international collaborations designed to open up new scientific directions for the proposer. These include, but are not limited to: research planning visits, initial data gathering activities, proof-of-concept, and single or multiple research visits within a maximum 12-month time period. The community is invited to propose innovative mechanisms and strategies for catalyzing new international collaborations with the goal of reaching the stage that competitive, full research proposals can be submitted to relevant NSF programs for continuing support of the project. Other well-justified activities that fulfill the goal of the program will be considered. Creative use of technology in promoting international research collaboration is encouraged.

Of particular interest are projects which represent new, previously unfunded scientific areas for the principal investigator, or areas in which preliminary data is needed for establishing a proof-of-concept. This mechanism is not intended to provide support for continuation of established collaborations. While a proposer is encouraged to bring his/her undergraduate or graduate students on proposed research abroad, the proposer must participate in catalyzing activity abroad in person and on-site.

For PIs with Active NSF Awards

PIs with active NSF awards related to the topic of their planned catalytic activity may be eligible to seek funding for the activity by requesting a supplement to the existing award. They should contact their cognizant Program Officer.

Additional Consideration

Visas and Permits: PIs are responsible for obtaining any required visas for foreign travel, and through the U.S. research institution, for providing documentation in support of U.S. visas for foreign collaborators, if applicable. PIs are also responsible for obtaining research permits and import/export documents, where necessary. PIs should review NSF's web page "Information for U.S. Travelers", http://www.nsf.gov/od/oise/for-travelers-main.jsp.

Management of Intellectual Property: PIs are responsible for developing a clear understanding with the foreign partners about sharing of data, information, authorship on publications, and other outcomes resulting from the CNIC-supported research collaboration. This should be described in the data management plan. CNIC awardees are expected to follow the NSF's policy on intellectual property.

III. AWARD INFORMATION

It is anticipated that approximately 30-40 awards will be made annually at a total investment of $2 million, subject to the quality of proposals and availability of funds. Awards will be standard grants.

Award duration (up to 12 months) and budget are expected to vary considerably depending on the scope of activities proposed.

IV. ELIGIBILITY INFORMATION

Organization Limit:

>   The categories of proposers eligible to submit proposals to the National Science Foundation are identified in the Grant Proposal Guide, Chapter I, Section E.

PI Limit:

>   None Specified

Limit on Number of Proposals per Organization:

>   None Specified

Limit on Number of Proposals per PI:

>   None Specified

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Full Proposal Preparation Instructions: Proposers may opt to submit proposals in response to this Program Solicitation via Grants.gov or via the NSF FastLane system.

- Full proposals submitted via FastLane: Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the general guidelines contained in the NSF Grant Proposal Guide (GPG). The complete text of the GPG is available electronically on the NSF website at: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg. Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from nsfpubs@nsf.gov. Proposers are reminded to identify this program solicitation number in the program solicitation block on the NSF Cover Sheet For Proposal to the National Science Foundation. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.

- Full proposals submitted via Grants.gov: Proposals submitted in response to this program solicitation via Grants.gov should be prepared and submitted in accordance with the NSF Grants.gov Application Guide: A Guide for the Preparation and

Submission of NSF Applications via Grants.gov. The complete text of the NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: (http://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide). To obtain copies of the Application Guide and Application Forms Package, click on the Apply tab on the Grants.gov site, then click on the Apply Step 1: Download a Grant Application Package and Application Instructions link and enter the funding opportunity number, (the program solicitation number without the NSF prefix) and press the Download Package button. Paper copies of the Grants.gov Application Guide also may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from nsfpubs@nsf.gov.

In determining which method to utilize in the electronic preparation and submission of the proposal, please note the following:

Collaborative Proposals. All collaborative proposals submitted as separate submissions from multiple organizations must be submitted via the NSF FastLane system. Chapter II, Section D.4 of the Grant Proposal Guide provides additional information on collaborative proposals.

Important Proposal Preparation Information: FastLane will check for required sections of the full proposal, in accordance with *Grant Proposal Guide* (GPG) instructions described in Chapter II.C.2. The GPG requires submission of: Project Summary; Project Description; References Cited; Biographical Sketch(es); Budget; Budget Justification; Current and Pending Support; Facilities, Equipment & Other Resources; Data Management Plan; and Postdoctoral Mentoring Plan, if applicable. If a required section is missing, **FastLane will not accept the proposal.**

Please note that the proposal preparation instructions provided in this program solicitation may deviate from the GPG instructions. If the solicitation instructions do not require a GPG-required section to be included in the proposal, insert text or upload a document in that section of the proposal that states, "Not Applicable for this Program Solicitation." Doing so will enable FastLane to accept your proposal.

The information below supplements the standard Grant Proposal Guide (GPG) and NSF Grants.gov Application Guide proposal preparation guidelines. Use them to prepare your proposal to catalyze a new international collaboration.

In determining which method to utilize in the electronic preparation and submission of the proposal, proposers should note the following:

1. **Proposal Cover Sheet**. Highlight this solicitation number in the program announcement/solicitation block and select 'Catalyzing New International Collaborations' as the Program in the Unit Selection List. Grants.gov Users: The program solicitation number will be pre-populated by Grants.gov on the NSF Grant Application Cover Page. Grants.gov users should refer to Section VI.1.2. of the NSF Grants.gov Application Guide for specific instructions on how to designate the NSF Unit of Consideration. Check the box for 'International Cooperative Activities Country Name' that appears under Other Information when the 'remainder of cover sheet' is clicked, then select the countries involved.

2. **Project Summary** (one page maximum). The Project Summary consists of an overview, a statement on the intellectual merit of the proposed activity, and a statement on the broader impacts of the proposed activity. Include the names and institutional affiliations of key foreign collaborators, and note their roles in the proposed activities in the overview section. Intellectual merit and broader impacts anticipated from the international activity must be addressed in separate paragraphs.

3. **Project Description**. May not exceed **eight** pages. Describe how the activity will promote and develop new collaborative research with foreign partners. Proposals submitted to this solicitation must include:
   - Research and education objectives of the proposed project, research activities, detailed schedule of activities, roles of all key individuals involved, and expected contributions from the foreign partners, if any.
   - Justification for selecting the proposed site/collaborators including description of unique expertise, facilities, and other resources being made available to the US researchers at the foreign site.
   - Description of ways in which the proposed project will open a new scientific direction for those involved, and ways in which U.S. students will be involved, if applicable.
   - Strategies and plans for continuing the collaboration; and expected outcomes and follow-up plans.

   Please note that per guidance in the GPG, the Project Description must contain, as a separate section within the narrative, a discussion of the broader impacts of the proposed activities. You can decide where to include this section within the Project Description.

4. **Project Budget**. The budget justification should explain and justify major cost items. Funding levels will typically range from $10,000 to $100,000, depending on the type and scope of activities proposed. Eligible expenses include international travel including subsistence, research supplies, bench-fees, and limited in-country travel expenses. Participation of students and postdoctoral fellows is encouraged, however the proposer must participate in research activity abroad in person and on site. Major equipment costs are not allowed.

   For living expenses abroad, applicants are encouraged to work with foreign counterparts to develop realistic budget requests. For example, access to university guest housing or similar facilities should be explored. In no case should the amount for lodging and meals and incidental expenses (MI&E) exceed the authorized U.S. Government per diem rates, calculated at the daily rate for the first 30 days of a single project visit, and 50 percent of that rate for all time after that. Various approaches to cost-effective, reciprocal arrangements can be considered. By law, U.S. flag carriers must be used in accordance with the Fly America Act (see Chapter VI.G.1b of the NSF Award and Administration Guide at http://nsf.gov/publications/pub_summ.jsp?ods_key=aag).

5. **Supplementary Documentation**.
   - Biographical sketches for all principal foreign collaborators. All sketches must adhere to the format given in the Grant Proposal Guide (Chapter II.C.2.f, http://nsf.gov/publications/pub_summ.jsp?ods_key=gpg).
   - Letters of cooperation from the principal collaborating foreign researchers and/or institutions.
   - Facilities available at partner institution should be listed as far as it is known at the time of submission.
   - Evidence of prior communication and consultation (e.g. copy of an email or synopsis of a telephone conversation) with the CNIC Program Director or a disciplinary Program Director indicating the appropriateness of the proposed activity within the scope of the program.

Failure to comply with the above listed requirements will result in proposal return without review.

For PIs with Active NSF Awards
PIs with active NSF awards related to the topic of their planned catalytic activity may be eligible to seek funding for the activity by requesting a supplement to the existing award. They should contact their cognizant Program Officer.

B. Budgetary Information

Cost Sharing: Inclusion of voluntary committed cost sharing is prohibited

Other Budgetary Limitations:

NSF generally provides support only to U.S. institutions, and typically will consider proposals for collaborative international projects provided support is requested only for the U.S. portion of the collaborative effort. OISE funding can support the participation of U.S. principal investigators, contributing researchers, postdoctoral fellows, students and support staff, when specifically justified in terms of the international collaboration. OISE support for students and postdoctoral researchers is generally limited to U.S. citizens and permanent residents.

In most cases, foreign participants should obtain their own funding for participation in the collaborative project. U.S. researchers should work with their foreign country partners to pursue their own support from local sources, non-governmental organizations (NGOs), or other organizations. NSF program officers may use their discretion to provide limited funding of the foreign portion of the collaboration when it is deemed essential to the success of the project and when there is no support for such participation from the foreign side. Support can be provided for the research costs but not the salary costs of the foreign research participants. Applicants should discuss specifics with the CNIC Program Director before submitting a proposal.

For living expenses abroad, applicants are encouraged to work with foreign hosts to develop realistic budget requests. For example, access to university guest housing or similar facilities should be explored. In no case should the amount for lodging and meals and incidental expenses (MI&E) exceed the authorized U.S. Government per diem rates, calculated at the daily rate for the first 30 days of a single project visit, and 50 percent of that rate for all time after that. Various approaches to cost-effective, reciprocal arrangements can be considered. By law, U.S. flag carriers must be used in accordance with the Fly America Act (see Chapter VI.G.1b of the NSF Award and Administration Guide at http://nsf.gov/publications/pub_summ.jsp?ods_key=aag).

C. Due Dates

- **Full Proposal Deadline(s)** (due by 5 p.m. proposer's local time)**:**

    Proposals Accepted Anytime

    > Applicants are advised to submit proposals at least nine months prior to the expected date of the proposed activity.

D. FastLane/Grants.gov Requirements

- **For Proposals Submitted Via FastLane:**

    Detailed technical instructions regarding the technical aspects of preparation and submission via FastLane are available at: https://www.fastlane.nsf.gov/a1/newstan.htm. For FastLane user support, call the FastLane Help Desk at 1-800-673-6188 or e-mail fastlane@nsf.gov. The FastLane Help Desk answers general technical questions related to the use of the FastLane system. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this funding opportunity.

    Submission of Electronically Signed Cover Sheets. The Authorized Organizational Representative (AOR) must electronically sign the proposal Cover Sheet to submit the required proposal certifications (see Chapter II, Section C of the Grant Proposal Guide for a listing of the certifications). The AOR must provide the required electronic certifications within five working days following the electronic submission of the proposal. Further instructions regarding this process are available on the FastLane Website at: https://www.fastlane.nsf.gov/fastlane.jsp.

- **For Proposals Submitted Via Grants.gov:**

    Before using Grants.gov for the first time, each organization must register to create an institutional profile. Once registered, the applicant's organization can then apply for any federal grant on the Grants.gov website. Comprehensive information about using Grants.gov is available on the Grants.gov Applicant Resources webpage: http://www07.grants.gov/applicants/app_help_reso.jsp. In addition, the NSF Grants.gov Application Guide provides additional technical guidance regarding preparation of proposals via Grants.gov. For Grants.gov user support, contact the Grants.gov Contact Center at 1-800-518-4726 or by email: support@grants.gov. The Grants.gov Contact Center answers general technical questions related to the use of Grants.gov. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this solicitation.

    Submitting the Proposal: Once all documents have been completed, the Authorized Organizational Representative (AOR) must submit the application to Grants.gov and verify the desired funding opportunity and agency to which the application is submitted. The AOR must then sign and submit the application to Grants.gov. The completed application will be transferred to the NSF FastLane system for further processing.

VI. NSF PROPOSAL PROCESSING AND REVIEW PROCEDURES

Proposals received by NSF are assigned to the appropriate NSF program for acknowledgement and, if they meet NSF requirements, for review. All proposals are carefully reviewed by a scientist, engineer, or educator serving as an NSF Program Officer, and usually by three to ten other persons outside NSF either as *ad hoc* reviewers, panelists, or both, who are experts in the particular fields represented by the proposal. These reviewers are selected by Program Officers charged with oversight of the review process. Proposers are invited to suggest names of persons they believe are especially well qualified to review the proposal and/or persons they would prefer not review the proposal. These suggestions may serve as one source in the reviewer selection process at the Program Officer's discretion. Submission of such names, however, is optional. Care is taken to ensure that reviewers have no conflicts of interest with the proposal. In addition, Program Officers may obtain comments from site visits before recommending final action on proposals. Senior NSF staff further review recommendations for awards. A flowchart that depicts the entire NSF proposal and award process (and associated timeline) is included in the GPG as Exhibit III-1.

A comprehensive description of the Foundation's merit review process is available on the NSF website at:

Proposers should also be aware of core strategies that are essential to the fulfillment of NSF's mission, as articulated in *Empowering the Nation Through Discovery and Innovation: NSF Strategic Plan for Fiscal Years (FY) 2011-2016*. These strategies are integrated in the program planning and implementation process, of which proposal review is one part. NSF's mission is particularly well-implemented through the integration of research and education and broadening participation in NSF programs, projects, and activities.

One of the core strategies in support of NSF's mission is to foster integration of research and education through the programs, projects and activities it supports at academic and research institutions. These institutions provide abundant opportunities where individuals may concurrently assume responsibilities as researchers, educators, and students, and where all can engage in joint efforts that infuse education with the excitement of discovery and enrich research through the variety of learning perspectives.

Another core strategy in support of NSF's mission is broadening opportunities and expanding participation of groups, institutions, and geographic regions that are underrepresented in STEM disciplines, which is essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports.

A. Merit Review Principles and Criteria

The National Science Foundation strives to invest in a robust and diverse portfolio of projects that creates new knowledge and enables breakthroughs in understanding across all areas of science and engineering research and education. To identify which projects to support, NSF relies on a merit review process that incorporates consideration of both the technical aspects of a proposed project and its potential to contribute more broadly to advancing NSF's mission "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense; and for other purposes." NSF makes every effort to conduct a fair, competitive, transparent merit review process for the selection of projects.

1. Merit Review Principles

These principles are to be given due diligence by PIs and organizations when preparing proposals and managing projects, by reviewers when reading and evaluating proposals, and by NSF program staff when determining whether or not to recommend proposals for funding and while overseeing awards. Given that NSF is the primary federal agency charged with nurturing and supporting excellence in basic research and education, the following three principles apply:

- All NSF projects should be of the highest quality and have the potential to advance, if not transform, the frontiers of knowledge.
- NSF projects, in the aggregate, should contribute more broadly to achieving societal goals. These "Broader Impacts" may be accomplished through the research itself, through activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project. The project activities may be based on previously established and/or innovative methods and approaches, but in either case must be well justified.
- Meaningful assessment and evaluation of NSF funded projects should be based on appropriate metrics, keeping in mind the likely correlation between the effect of broader impacts and the resources provided to implement projects. If the size of the activity is limited, evaluation of that activity in isolation is not likely to be meaningful. Thus, assessing the effectiveness of these activities may best be done at a higher, more aggregated, level than the individual project.

With respect to the third principle, even if assessment of Broader Impacts outcomes for particular projects is done at an aggregated level, PIs are expected to be accountable for carrying out the activities described in the funded project. Thus, individual projects should include clearly stated goals, specific descriptions of the activities that the PI intends to do, and a plan in place to document the outputs of those activities.

These three merit review principles provide the basis for the merit review criteria, as well as a context within which the users of the criteria can better understand their intent.

2. Merit Review Criteria

All NSF proposals are evaluated through use of the two National Science Board approved merit review criteria. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

The two merit review criteria are listed below. **Both** criteria are to be given **full consideration** during the review and decision-making processes; each criterion is necessary but neither, by itself, is sufficient. Therefore, proposers must fully address both criteria. (GPG Chapter II.C.2.d.i. contains additional information for use by proposers in development of the Project Description section of the proposal.) Reviewers are strongly encouraged to review the criteria, including GPG Chapter II.C.2.d.i., prior to the review of a proposal.

When evaluating NSF proposals, reviewers will be asked to consider what the proposers want to do, why they want to do it, how they plan to do it, how they will know if they succeed, and what benefits could accrue if the project is successful. These issues apply both to the technical aspects of the proposal and the way in which the project may make broader contributions. To that end, reviewers will be asked to evaluate all proposals against two criteria:

- **Intellectual Merit:** The Intellectual Merit criterion encompasses the potential to advance knowledge; and
- **Broader Impacts:** The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.

The following elements should be considered in the review for both criteria:

1. What is the potential for the proposed activity to
    a. Advance knowledge and understanding within its own field or across different fields (Intellectual Merit); and
    b. Benefit society or advance desired societal outcomes (Broader Impacts)?
2. To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
3. Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
4. How well qualified is the individual, team, or organization to conduct the proposed activities?
5. Are there adequate resources available to the PI (either at the home organization or through collaborations) to carry out the proposed activities?

Broader impacts may be accomplished through the research itself, through the activities that are directly related to specific research

projects, or through activities that are supported by, but are complementary to, the project. NSF values the advancement of scientific knowledge and activities that contribute to achievement of societally relevant outcomes. Such outcomes include, but are not limited to: full participation of women, persons with disabilities, and underrepresented minorities in science, technology, engineering, and mathematics (STEM); improved STEM education and educator development at any level; increased public scientific literacy and public engagement with science and technology; improved well-being of individuals in society; development of a diverse, globally competitive STEM workforce; increased partnerships between academia, industry, and others; improved national security; increased economic competitiveness of the United States; and enhanced infrastructure for research and education.

Proposers are reminded that reviewers will also be asked to review the Data Management Plan and the Postdoctoral Researcher Mentoring Plan, as appropriate.

Additional Solicitation Specific Review Criteria

In addition to the general NSF review criteria described above, the following criteria will be used in evaluating proposals submitted in response to this announcement:

1. Mutual benefits among partners; true intellectual collaboration with the foreign partner(s); and benefits to be realized from the expertise and specialized skills, facilities, sites, and/or resources of the international counterpart(s).

2. The extent to which the proposed collaboration opens a new scientific direction for which the principal investigator is not yet funded; the extent to which proposed activities are likely to lead to potentially transformative contributions to research and education not possible without this catalytic step; and the extent to which the proposed collaboration contributes to the professional development of the principal investigator.

B. Review and Selection Process

Proposals submitted in response to this program solicitation will be reviewed by Ad hoc Review and/or Panel Review, or Internal NSF Review.

NSF anticipates most CNIC proposals will be requesting expenses associated with international travel. International travel grant proposals require only internal review. The CNIC Program Director will decide whether to seek external reviews in consultation with his/her supervisor and the relevant disciplinary program officer. The two standard NSB merit review criteria and additional review criteria described in the solicitation will apply regardless of the review mechanism used.

Reviewers will be asked to formulate a recommendation to either support or decline each proposal. The Program Officer assigned to manage the proposal's review will consider the advice of reviewers and will formulate a recommendation.

After scientific, technical and programmatic review and consideration of appropriate factors, the NSF Program Officer recommends to the cognizant Division Director whether the proposal should be declined or recommended for award. NSF is striving to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. The time interval begins on the deadline or target date, or receipt date, whichever is later. The interval ends when the Division Director accepts the Program Officer's recommendation.

A summary rating and accompanying narrative will be completed and submitted by each reviewer. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers, are sent to the Principal Investigator/Project Director by the Program Officer. In addition, the proposer will receive an explanation of the decision to award or decline funding.

In all cases, after programmatic approval has been obtained, the proposals recommended for funding will be forwarded to the Division of Grants and Agreements for review of business, financial, and policy implications and the processing and issuance of a grant or other agreement. Proposers are cautioned that only a Grants and Agreements Officer may make commitments, obligations or awards on behalf of NSF or authorize the expenditure of funds. No commitment on the part of NSF should be inferred from technical or budgetary discussions with a NSF Program Officer. A Principal Investigator or organization that makes financial or personnel commitments in the absence of a grant or cooperative agreement signed by the NSF Grants and Agreements Officer does so at their own risk.

VII. AWARD ADMINISTRATION INFORMATION

A. Notification of the Award

Notification of the award is made to *the submitting organization* by a Grants Officer in the Division of Grants and Agreements. Organizations whose proposals are declined will be advised as promptly as possible by the cognizant NSF Program administering the program. Verbatim copies of reviews, not including the identity of the reviewer, will be provided automatically to the Principal Investigator. (See Section VI.B. for additional information on the review process.)

B. Award Conditions

An NSF award consists of: (1) the award letter, which includes any special provisions applicable to the award and any numbered amendments thereto; (2) the budget, which indicates the amounts, by categories of expense, on which NSF has based its support (or otherwise communicates any specific approvals or disapprovals of proposed expenditures); (3) the proposal referenced in the award letter; (4) the applicable award conditions, such as Grant General Conditions (GC-1); * or Research Terms and Conditions * and (5) any announcement or other NSF issuance that may be incorporated by reference in the award letter. Cooperative agreements also are administered in accordance with NSF Cooperative Agreement Financial and Administrative Terms and Conditions (CA-FATC) and the applicable Programmatic Terms and Conditions. NSF awards are electronically signed by an NSF Grants and Agreements Officer and transmitted electronically to the organization via e-mail.

*These documents may be accessed electronically on NSF's Website at http://www.nsf.gov/awards/managing/award_conditions.jsp?org=NSF. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from nsfpubs@nsf.gov.

More comprehensive information on NSF Award Conditions and other important information on the administration of NSF awards is contained in the NSF *Award & Administration Guide* (AAG) Chapter II, available electronically on the NSF Website at http://www.nsf.gov/publications/pub_summ.jsp?ods_key=aag.

C. Reporting Requirements

For all multi-year grants (including both standard and continuing grants), the Principal Investigator must submit an annual project report to the cognizant Program Officer at least 90 days prior to the end of the current budget period. (Some programs or awards require submission of more frequent project reports). Within 90 days following expiration of a grant, the PI also is required to submit a final project report, and a project outcomes report for the general public.

Failure to provide the required annual or final project reports, or the project outcomes report, will delay NSF review and processing of any future funding increments as well as any pending proposals for all identified PIs and co-PIs on a given award. PIs should examine the formats of the required reports in advance to assure availability of required data.

PIs are required to use NSF's electronic project-reporting system, available through Research.gov, for preparation and submission of annual and final project reports. Such reports provide information on accomplishments, project participants (individual and organizational), publications, and other specific products and impacts of the project. Submission of the report via Research.gov constitutes certification by the PI that the contents of the report are accurate and complete. The project outcomes report also must be prepared and submitted using Research.gov. This report serves as a brief summary, prepared specifically for the public, of the nature and outcomes of the project. This report will be posted on the NSF website exactly as it is submitted by the PI.

More comprehensive information on NSF Reporting Requirements and other important information on the administration of NSF awards is contained in the NSF *Award & Administration Guide* (AAG) Chapter II, available electronically on the NSF Website at http://www.nsf.gov/publications/pub_summ.jsp?ods_key=aag.

VIII. AGENCY CONTACTS

Please note that the program contact information is current at the time of publishing. See program website for any updates to the points of contact.

General inquiries regarding this program should be made to:

- R. Clive Woods, telephone: (703) 292-8710, email: OISE-CNIC@nsf.gov

For questions related to the use of FastLane, contact:

- FastLane Help Desk, telephone: 1-800-673-6188; e-mail: fastlane@nsf.gov.

For questions relating to Grants.gov contact:

- Grants.gov Contact Center: If the Authorized Organizational Representatives (AOR) has not received a confirmation message from Grants.gov within 48 hours of submission of application, please contact via telephone: 1-800-518-4726; e-mail: support@grants.gov.

Principal Investigators **must** communicate with NSF program officers **prior to submission** to this solicitation.

CNIC awards support international planning visits that are intended to result in submission of a full research proposal to NSF. Therefore the first step in preparing a CNIC proposal is to **identify which NSF division is the appropriate home for that follow-on research proposal**, and communicate with the cognizant program officer to confirm suitability of the planning visit as a precursor to a research proposal. The PI should provide a brief (one page max) description of proposed activities, including research questions that will be explored, reasons why international collaboration is key to the project's success, names and institutions of proposed collaborators, and a rough outline of how the funds would be spent.

PIs should also contact the CNIC program director or the OISE regional/country program officer for the location of the planning visit, to discuss proposal development and appropriate funding levels. (Check the OISE Regional & Program Contacts page.)

Disciplinary program officers or the CNIC program director will advise potential proposers if the international collaboration activity should be submitted to CNIC or to another program as a regular proposal, a supplement, or an EAGER.

IX. OTHER INFORMATION

The NSF website provides the most comprehensive source of information on NSF Directorates (including contact information), programs and funding opportunities. Use of this website by potential proposers is strongly encouraged. In addition, "My NSF" is an information-delivery system designed to keep potential proposers and other interested parties apprised of new NSF funding opportunities and publications, important changes in proposal and award policies and procedures, and upcoming NSF Grants Conferences. Subscribers are informed through e-mail or the user's Web browser each time new publications are issued that match their identified interests. "My NSF" also is available on NSF's website at http://www.nsf.gov/mynsf/.

Grants.gov provides an additional electronic capability to search for Federal government-wide grant opportunities. NSF funding opportunities may be accessed via this new mechanism. Further information on Grants.gov may be obtained at http://www.grants.gov.

Related Programs:

> This solicitation offers support for the initial phases of an international collaboration with the strong expectation that the next phase will involve submission of a follow-on proposal for continued funding of the collaboration. Follow-on proposals may be submitted to **any** appropriate NSF program.

Investigators also may wish to view the Programs and Funding Opportunities section of the OISE home page http://www.nsf.gov/div/index.jsp?div=OISE to view the lists of OISE Managed Opportunities and other NSF Opportunities that Highlight International Collaboration.

ABOUT THE NATIONAL SCIENCE FOUNDATION

The National Science Foundation (NSF) is an independent Federal agency created by the National Science Foundation Act of 1950, as amended (42 USC 1861-75). The Act states the purpose of the NSF is "to promote the progress of science; [and] to advance the national health, prosperity, and welfare by supporting research and education in all fields of science and engineering."

NSF funds research and education in most fields of science and engineering. It does this through grants and cooperative agreements to more than 2,000 colleges, universities, K-12 school systems, businesses, informal science organizations and other research organizations throughout the US. The Foundation accounts for about one-fourth of Federal support to academic institutions for basic research.

NSF receives approximately 55,000 proposals each year for research, education and training projects, of which approximately 11,000 are funded. In addition, the Foundation receives several thousand applications for graduate and postdoctoral fellowships. The agency operates no laboratories itself but does support National Research Centers, user facilities, certain oceanographic vessels and Arctic and Antarctic research stations. The Foundation also supports cooperative research between universities and industry, US participation in international scientific and engineering efforts, and educational activities at every academic level.

Facilitation Awards for Scientists and Engineers with Disabilities provide funding for special assistance or equipment to enable persons with disabilities to work on NSF-supported projects. See Grant Proposal Guide Chapter II, Section D.2 for instructions regarding preparation of these types of proposals.

The National Science Foundation has Telephonic Device for the Deaf (TDD) and Federal Information Relay Service (FIRS) capabilities that enable individuals with hearing impairments to communicate with the Foundation about NSF programs, employment or general information. TDD may be accessed at (703) 292-5090 and (800) 281-8749, FIRS at (800) 877-8339.

The National Science Foundation Information Center may be reached at (703) 292-5111.

The National Science Foundation promotes and advances scientific progress in the United States by competitively awarding grants and cooperative agreements for research and education in the sciences, mathematics, and engineering.

To get the latest information about program deadlines, to download copies of NSF publications, and to access abstracts of awards, visit the NSF Website at http://www.nsf.gov

- **Location:** 4201 Wilson Blvd. Arlington, VA 22230

- **For General Information** (NSF Information Center)**:** (703) 292-5111

- **TDD (for the hearing-impaired):** (703) 292-5090

- **To Order Publications or Forms:**

    Send an e-mail to: nsfpubs@nsf.gov

    or telephone: (703) 292-7827

- **To Locate NSF Employees:** (703) 292-5111

PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

The information requested on proposal forms and project reports is solicited under the authority of the National Science Foundation Act of 1950, as amended. The information on proposal forms will be used in connection with the selection of qualified proposals; and project reports submitted by awardees will be used for program evaluation and reporting within the Executive Branch and to Congress. The information requested may be disclosed to qualified reviewers and staff assistants as part of the proposal review process; to proposer institutions/grantees to provide or obtain data regarding the proposal review process, award decisions, or the administration of awards; to government contractors, experts, volunteers and researchers and educators as necessary to complete assigned work; to other government agencies or other entities needing information regarding applicants or nominees as part of a joint application review process, or in order to coordinate programs or policy; and to another Federal agency, court, or party in a court or Federal administrative proceeding if the government is a party. Information about Principal Investigators may be added to the Reviewer file and used to select potential candidates to serve as peer reviewers or advisory committee members. See Systems of Records, NSF-50, "Principal Investigator/Proposal File and Associated Records," 69 Federal Register 26410 (May 12, 2004), and NSF-51, "Reviewer/Proposal File and Associated Records," 69 Federal Register 26410 (May 12, 2004). Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

An agency may not conduct or sponsor, and a person is not required to respond to, an information collection unless it displays a valid Office of Management and Budget (OMB) control number. The OMB control number for this collection is 3145-0058. Public reporting burden for this collection of information is estimated to average 120 hours per response, including the time for reviewing instructions. Send comments regarding the burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to:

Suzanne H. Plimpton
Reports Clearance Officer
Division of Administrative Services
National Science Foundation
Arlington, VA 22230

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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

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