# Developmental and Learning Sciences (DLS)

## Program Solicitation
**NSF 07-508**

***Replaces Document(s):***
**NSF 06-511**

**National Science Foundation**

Directorate for Social, Behavioral & Economic Sciences
Division of Behavioral and Cognitive Sciences

**Full Proposal Target Date(s):**

January 19, 2007

For Individual Investigator Research Projects, Workshops, Small Conferences, and Integrative Research Activities for Developmental Sciences (IRADS)

July 15, 2007

For Individual Investigator Research Projects, Workshops, and Small Conferences

January 15, 2008

January 15, Annually Thereafter

July 15, 2008

July 15, Annually Thereafter

## REVISION NOTES

In furtherance of the President's Management Agenda, NSF has identified programs that will offer proposers the option to utilize Grants.gov to prepare and submit proposals, or will require that proposers utilize Grants.gov to prepare and submit proposals. Grants.gov provides a single Government-wide portal for finding and applying for Federal grants online.

In response to this program solicitation, proposers may opt to submit proposals via Grants.gov or via the NSF FastLane system. 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.3 of the Grant Proposal Guide provides additional information on collaborative proposals.

## SUMMARY OF PROGRAM REQUIREMENTS

### General Information

**Program Title:**

Developmental and Learning Sciences (DLS)
A Multidisciplinary Program of the Children's Research Initiative

**Synopsis of Program:**

This program supports studies that increase our understanding of cognitive, linguistic, social, cultural, and biological processes related to children's and adolescents' development and learning. Additional priorities are to support developmental research that: incorporates multidisciplinary, multi-method, microgenetic, and longitudinal approaches; develops new methods and theories; examines transfer of knowledge from one domain to another and from one situation to another; assesses peer relations, family interactions, social identities, and motivation; examines the impact of family, school, and community resources; assesses adolescents' preparation for entry into the workforce; and investigates the role of demographic characteristics and cultural influences on children's development. Research supported by this program will add to our basic knowledge of how people learn and the underlying developmental processes that support learning, with the objective of leading to better educated children and adolescents who grow up to take productive roles as workers and as citizens.

**Cognizant Program Officer(s):**

- Amy Sussman, Program Director, 995 N, telephone: (703) 292-7307, email: asussman@nsf.gov
- Maurice Dues, Program Assistant, 995 N, telephone: (703) 292-7311, fax: (703) 292-9068, email: mdues@nsf.gov

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

- 47.075 --- Social Behavioral and Economic Sciences

### Award Information

**Anticipated Type of Award:** Standard Grant or Continuing Grant

**Estimated Number of Awards:** 18 to 28 each year, plus up to two (2) additional awards for IRADS

**Anticipated Funding Amount:** $5,000,000 Approximately $5 million annually, subject to the availability of funds.

### Eligibility Information

**Organization Limit:**

Proposals may only be submitted by the following:

- Proposals submitted in response to this solicitation will be accepted from colleges, universities, and other not-for-profit institutions in the U.S. with research and education programs in any area normally supported by NSF.

  For the IRADS competition, some additional requirements apply. Each type of IRADS activity must meet the following requirements:

  - be based in a doctoral degree-granting academic institution;
  - be directed by a faculty member and integrated into academic programs

**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
- **Full Proposals:**
  - Full Proposals submitted via FastLane: 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/bfa/dias/policy/docs/grantsgovguide.pdf/)

**B. Budgetary Information**

- **Cost Sharing Requirements:** Cost Sharing is not required by NSF.
- **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 Target Date(s):**

  January 19, 2007

  For Individual Investigator Research Projects, Workshops, Small Conferences, and Integrative Research Activities for Developmental Sciences (IRADS)

  July 15, 2007

  For Individual Investigator Research Projects, Workshops, and Small Conferences

  January 15, 2008

  January 15, Annually Thereafter

  July 15, 2008

July 15, Annually Thereafter

## 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:** Additional reporting requirements apply. Please see the full text of this solicitation for further information.

## TABLE OF CONTENTS



## I. INTRODUCTION

America's success in this new century requires that our youth grow up to take productive roles as workers and as citizens. Key elements of this success are the developments that undergird effective learning, including children's and adolescents' cognitive, linguistic, social, cultural, and biological development. Adaptive learning in the 21st century cannot be focused on acquiring a limited set of skills or bodies of knowledge that may become dated or obsolete. Rather, learning in the 21st century must focus on flexibility in acquiring new knowledge and skills, on the transfer of knowledge and skills from one situation to another, and on creative problem-solving. Learning begins early in a child's life, long before school entry, and is a lifelong developmental process.

The current picture of children's learning and development is mixed. In 1997, a National Science and Technology Council report, *Investing in our Future: A National Research Initiative for America's Children for the 21st Century,* outlined significant advances in scientific knowledge on child and adolescent development. At the same time, this report emphasized that many challenges to understanding learning and development remain. For example, American children's reading and science test scores are improving but still fall short of the test performance of children in other industrialized countries. The extraordinary demographic and technological changes of recent decades have further challenged our fundamental knowledge about children's learning and development. A solid body of research on children's learning and development, including studies of the early learning years and extending through the adolescent years, is necessary for improvements in the future prospects for youth.

## II. PROGRAM DESCRIPTION

### PROGRAM OBJECTIVES

The primary objective of the Developmental and Learning Sciences Program is to support research that focuses on the mechanisms of development that explain when and how children and adolescents acquire new skills and knowledge and to elucidate the underlying developmental processes that support learning.

Human development research has been conducted traditionally in terms of disparate processes (e.g., learning, perception, action, memory), separate levels of analysis (e.g., behavioral, social, neural), and different time scales (e.g. infancy, middle childhood, adolescence), all largely within separate subdisciplines. However, to understand the complexity of human behavior requires unified explanations of development, which current and developing tools and technologies of science are now making possible. Explanations that are based on research evidence are needed to integrate the traditional knowledge domains and levels of analysis. The requirements for such integrative research are at the scale of: (1) development, plasticity, adaptation, and social, interpersonal, and family experiences; (2) enduring effects; (3) conceptual frameworks and mathematical models for systems descriptions; (4) different levels of the nervous system, (5) coherence among multiple system component parts; (6) the developmental interplay between genes and environment as they contribute to normal variation in cognition and learning; (7) social, cultural, and evolutionary perspectives; and (8) experience/ statistics of neural tuning and the relationship to behavior. Although any single research project is unlikely to incorporate all of the above issues, research on complex systems has the goal of integrating at least subsets of these issues.

Developmental research needs to become more integrated in focus and draw relevant fields together for interdisciplinary collaborations. Fields such as cognitive science and neuroscience, for example, have made important advances through their joint efforts.

The current need is to generate new approaches to research complex human systems by studying the contexts of human development, ecological factors, and a variety of interactive phenomena that impact human growth and development. Since there is presently a diversity of methodologies across the separate research disciplines that comprise human developmental sciences, there is a need to focus on ways to integrate qualitative and quantitative methods across the sciences.

There is also a need to develop mechanisms to make collaborations and data sharing easier among researchers. National databases and longitudinal studies can foster interdisciplinary collaborations and uses of cross-disciplinary data, promote broader exploration of testable questions across datasets, increase the quality of data by maintaining accurate and uniform records, and promote cost-effectiveness through the sharing of research data. Furthermore, databases that are built from representative samples of the changing national population have the potential to broaden the scope and power of research findings.

### RESEARCH PRIORITIES

The Developmental and Learning Sciences Program encourages research that will increase scientific understanding of fundamental developmental processes, including cognitive, linguistic, social, and biological (e.g., neural, hormonal) processes of learning and development. Priority will be given to studies addressing one or more of the following:

- Fundamental research on developmental processes during the perinatal and prenatal periods, infancy, childhood, adolescence, and young adulthood.
- Studies of the relationships among biological, cognitive, linguistic, social, and emotional aspects of human development over the life course.

- Developmental cognitive neuroscience research on how people learn, neurologic pathways and brain adaptability, and experiential and environmental factors that stimulate development.
- Development of higher-order cognitive processes, including critical thinking, communication, memory, language, mental representation, and other processes that maximize learning potential.
- Relations between the development of specific and general forms of knowledge; age-related changes in the processes of transfer of knowledge in one domain to children's understanding of another domain.
- Multidisciplinary, multi-method, microgenetic, and longitudinal approaches to the study of development during childhood and adolescence, including ethnographic research.
- Use of molecular genetics data to inform the study of continuities and discontinuities in development.
- Development of new methods, models, and theories for studying learning and development.
- Relations of children's and adolescents' development of peer relationships, family interactions, social identities, and motivation.
- Studies of the multiple influences on children's development, including the impact of family, school, community resources, and social institutions on the learning and development of children and adolescents.
- Research on how development is mediated by peers, social institutions, the media, and popular culture.
- Relations of adolescents' development to their preparation for entry into the workforce.
- Cross-cultural research on cognitive, social-cognitive, and emotional development.
- The role of cultural influences and demographic characteristics (e.g., children's socioeconomic status, ethnicity, immigrant status, gender) on development; and the role of culture as internal processes (e.g., value perspectives, construction of meaning, etc.)

The above listing of priorities indicates that funding will be available for a wide range of topics; however, studies must be clearly linked to the primary objective of understanding the mechanisms of human development that support children's acquisition of new knowledge and skills.

**FUNDING OPPORTUNITIES**

1. **INDIVIDUAL INVESTIGATOR RESEARCH PROJECTS.** It is recognized that many research topics are studied most effectively by individual research scientists or by small teams of collaborating investigators. Individual investigators are invited to submit proposals that address the research priorities listed above.

2. **WORKSHOPS AND SMALL CONFERENCES.** Workshops and small conferences are useful for assessing the research needs of the field and for planning ways to address research gaps and new directions. Workshop and conference proposals will be awarded on a one-time basis.

3. **INTEGRATIVE RESEARCH ACTIVITIES FOR DEVELOPMENTAL SCIENCE (IRADS).** A third funding opportunity is for collaborators to create research activities for the purposes of conducting multidisciplinary, integrative research on scales larger than might be possible through individual research projects. The organizations provide rich environments that combine research perspectives from multi-disciplinary areas. These organizations are required to show how they: 1) enhance the content knowledge of the field; 2) build an intellectual infrastructure within and among disciplines; and 3) build a program of research in relevant aspects of developmental, learning, and human sciences.

   These integrative research activities may vary in size and exhibit diverse forms of organization. No single type of organizational structure fits the needs of every group of collaborators. Rather, the size, structure, and operation of an IRADS will be determined by the proposed research, education, and knowledge transfer activities. Although each type of activity will be unique in some respects, each must meet the following requirements:

- Be based in a doctoral degree-granting academic institution;
- Be directed by a faculty member and integrated into academic programs;
- Reflect commitment to achieving strategic goals shared by the host and partnering institutions as demonstrated by institutional commitments;
- Provide a variety of education and research opportunities for U.S. students and faculty (e.g., undergraduate and graduate students, postdoctoral researchers, students from groups underrepresented in human sciences, K-12 teachers, and visiting participants);
- Have significant intellectual exchange and resource linkages among various collaborators to facilitate knowledge transfer (e.g., colleges and universities such as minority-serving institutions, community colleges, EPSCoR institutions, research laboratories, etc.);
- Include career-broadening experiences as appropriate to the research areas (e.g., industrial, national, or international laboratory internships, etc.);
- Include a management plan for monitoring the research activities; and
- Have annual budgets up to $500,000 of NSF support for 3 to 5 years

Any institution or group of institutions that fulfills the preceding requirements may submit a proposal for an IRADS. Minority-serving, rural, and comprehensive institutions of higher education that have faculty and researchers in areas of developmental sciences are encouraged to submit proposals.

## III. AWARD INFORMATION

Estimated program budget, number of awards and average award size/duration are subject to the availability of funds. Award durations of one to five years will be considered. It is anticipated that about $5 million will be available annually.

The following different types of grant mechanisms will be available:

**Individual Investigator Awards**

- Anticipated Type of Award: Standard and Continuing grants
- Estimated Number of Awards: 15 - 20, each year

**Workshops and Small Conferences**

- Anticipated Type of Award: Standard grants
- Estimated Number of Awards: 3 - 8, each year

**Integrative Research Activities for Developmental Science (IRADS)**

- Anticipated Type of Award: Continuing grants
- Anticipated Number of Awards: 2 awards

## IV. ELIGIBILITY INFORMATION

**Organization Limit:**

Proposals may only be submitted by the following:

- Proposals submitted in response to this solicitation will be accepted from colleges, universities, and other not-for-profit institutions in the U.S. with research and education programs in any area normally supported by NSF.

  For the IRADS competition, some additional requirements apply. Each type of IRADS activity must meet the following requirements:

  - be based in a doctoral degree-granting academic institution;

- be directed by a faculty member and integrated into academic programs

**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 pubs@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/bfa/dias/policy/docs/grantsgovguide.pdf). 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 pubs@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.3 of the Grant Proposal Guide provides additional information on collaborative proposals.

**Individual investigator projects** must follow the guidelines of the Grant Proposal Guide (GPG) or the NSF Grants.gov Application Guide. Special requirements for workshops and small conferences are indicated below.

**Workshops and conference proposals** project descriptions must not exceed 10 pages and should not include appendices. Workshops and conference proposals should include the following information: 1) description of the needs addressed; 2) proposed solutions for addressing the needs; 3) meeting agenda and list of participants who will attend the meeting; and 4) plans for a consensus document that presents a research agenda and recommendations for future research in the area(s) addressed.

**Integrative research activities for developmental science (IRADS)** projects descriptions should not exceed 15 pages, but may include up to 5 additional pages for the management plan for monitoring the research activities. Proposal project

descriptions should include the following information: 1) description of the need addressed; 2) evidence that the institutional capacity has been enhanced; 3) documentation that partnerships have been established and/or strengthened; 4) the individual science projects supported by organization activities. **Proposal titles must begin with "IRADS"**. *Please note additional review criteria for these proposals*.

## B. Budgetary Information

**Cost Sharing:** Cost sharing is not required by NSF in proposals submitted to the National Science Foundation.

**Other Budgetary Limitations:**

**Individual Investigator** projects are anticipated to have annual budgets (total costs) in the $75,000 to $120,000 range, depending upon the research requirements. Annual budgets that exceed these amounts that are well-justified will be considered. Research support can be requested for up to 5 years. Support is available for, but not limited to: staff release time, consultants' fees, travel, computer network time, research costs, and related costs for materials and supplied.

**Workshops and Small Conferences** are anticipated to have budgets (total costs) in the $10,000 to $15,000 range, depending upon the size of the meeting. Budgets that exceed these amounts that are well-justified will be considered.

**Integrative Research Activities for Developmental Science (IRADS)** may request up to $500,000 of NSF support annually for 3-5 years. IRADS directors may be asked to meet in Washington, D.C. for an annual IRADS Directors' conference. Expenses to travel to these conferences should be included in annual budgets.

## C. Due Dates

- **Full Proposal Target Date(s):**

  January 19, 2007

  For Individual Investigator Research Projects, Workshops, Small Conferences, and Integrative Research Activities for Developmental Sciences (IRADS)

  July 15, 2007

  For Individual Investigator Research Projects, Workshops, and Small Conferences

  January 15, 2008

  January 15, Annually Thereafter

  July 15, 2008

  July 15, Annually Thereafter

## 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. The Grants.gov's Grant Community User Guide is a comprehensive reference document that provides technical information about Grants.gov. Proposers can download the User Guide as a Microsoft Word document or as a PDF document. The Grants.gov User Guide is available at: http://www.grants.gov/CustomerSupport. 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 and, if they meet NSF proposal preparation 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 who are experts in the particular fields represented by the proposal. These reviewers are selected by Program Officers charged with the 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 with the proposer.

### A. NSF Merit Review Criteria

All NSF proposals are evaluated through use of the two National Science Board (NSB)-approved merit review criteria: intellectual merit and the broader impacts of the proposed effort. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

The two NSB-approved merit review criteria are listed below. The criteria include considerations that help define them. These considerations are suggestions and not all will apply to any given proposal. While proposers must address both merit review criteria, reviewers will be asked to address only those considerations that are relevant to the proposal being considered and for which the reviewer is qualified to make judgements.

**What is the intellectual merit of the proposed activity?**
How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of the prior work.) To what extent does the proposed activity suggest and explore creative and original concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

**What are the broader impacts of the proposed activity?**
How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)? To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships? Will the results be disseminated broadly to enhance scientific and technological understanding? What may be the benefits of the proposed activity to society?

NSF staff will give careful consideration to the following in making funding decisions:

***Integration of Research and Education***
One of the principal strategies in support of NSF's goals 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 diversity of learning perspectives.

***Integrating Diversity into NSF Programs, Projects, and Activities***
Broadening opportunities and enabling the participation of all citizens -- women and men, underrepresented minorities, and persons with disabilities -- 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.

**Additional Review Criteria:**

**The following additional review criteria apply only to proposals to the Integrative Research Activities for Developmental Science (IRADS).**

In addition to the evaluation criteria stated above, NSF will consider the following additional criteria in making IRADS awards. Excellence must be demonstrated in all criteria (general merit criteria above and considerations specific to IRADS proposals below) for support to be recommended:

**Value of the Collaborative and Integrative Mode to Research, Education, and Knowledge Transfer**. Are the science and research challenges of sufficient import, scale, and complexity to justify a collaborative or IRADS investment? Will the partnerships achieve significant intellectual exchange? Will any proposed new instruments, shared experimental facilities, and/or databases be of significant value to a broad community of users? Will the educational programs make a special contribution to the achievement of a diverse, highly competent, and globally-engaged workforce and of an educated citizenry?

**Integrative Nature of the Proposed Project**. Are research, educational, and knowledge transfer activities strategically integrated such that the whole is greater than the sum of its parts? Are the partners vital participants in an integrated whole?

**Leadership.** Do the Principal Investigator (PI) and the leadership team convincingly demonstrate the vision, experience, and capacity to manage a complex, multi-faceted, and innovative research education, and knowledge transfer enterprise?

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

## B. Review and Selection Process

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

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 date of receipt. 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 Federal Demonstration Partnership (FDP) 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/general_conditions.jsp?org=NSF. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from pubs@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 before the end of the current budget period. (Some programs or awards require more frequent project reports). Within 90 days after expiration of a grant, the PI also is required to submit a final project report.

Failure to provide the required annual or final project reports will delay NSF review and processing of any future funding increments as well as any pending proposals for that PI. 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 FastLane, for preparation and submission of annual and final project reports. Such reports provide information on activities and findings, project participants (individual and organizational) publications; and, other specific products and contributions. PIs will not be required to re-enter information previously provided, either with a proposal or in earlier updates using the electronic system. Submission of the report via FastLane constitutes certification by the PI that the contents of the report are accurate and complete.

**Workshop and Small Conference** reports will include the following in their reports: 1) description of the needs addressed; 2) solutions proposed during workshop and conference deliberation; 3) meeting agenda; and 4) consensus report in the form of a research agenda and recommendations for future research.

**Integrative Research Activities for Developmental Science (IRADS)** will include the following in their reports: 1) description of the need addressed; 2) evidence that the institutional capacity has been enhanced; 3) documentation that partnerships have been established and/or strengthened; 4) reports on the individual science projects supported by IRADS activities.

## VIII. AGENCY CONTACTS

General inquiries regarding this program should be made to:

- Amy Sussman, Program Director, 995 N, telephone: (703) 292-7307, email: asussman@nsf.gov
- Maurice Dues, Program Assistant, 995 N, telephone: (703) 292-7311, fax: (703) 292-9068, email: mdues@nsf.gov

For questions related to the use of FastLane, contact:

- FastLane Help Desk, telephone: 1-800-673-6188; e-mail: fastlane@nsf.gov.
- C. Michelle Jenkins, Program and Technology Specialist, 995 N, telephone: (703) 292-7874, email: cjenkins@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.

## 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, MyNSF (formerly the Custom News Service)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 Regional 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. MyNSF 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.

## 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 40,000 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 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: pubs@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



The National Science Foundation, 4201 Wilson Boulevard, Arlington, Virginia 22230, USA
Tel: (703) 292-5111, FIRS: (800) 877-8339 | TDD: (800) 281-8749