Human Origins (HOMINID)

Moving in New Directions

Program Solicitation

NSF 01-120

DIVISION OF BEHAVIORAL AND COGNITIVE SCIENCES
DIRECTORATE FOR SOCIAL, BEHAVIORAL, AND ECONOMIC SCIENCES

FULL PROPOSAL DEADLINE(S) :

February 4, 2002 and first Monday in February thereafter.

NATIONAL SCIENCE FOUNDATION

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SUMMARY OF PROGRAM REQUIREMENTS

GENERAL INFORMATION

Program Title: Human Origins (HOMINID)

Synopsis of Program: This competition is directed towards enhancing our knowledge of the complex biological, physical and behavioral interrelationships that led to the development of our species and which are responsible for both the shared and variable features that characterize living human populations. It recognizes that understanding of the processes and pathways of human evolution requires input from a wide range of disciplines which examine our species from multiple perspectives and across both time and space. Effective accomplishment of this goal requires large scale initiatives which provide a counterpoint to standard NSF program grants. The Human Origins competition (HOMINID) will support large scale, long term, integrative research and infrastructure projects through awards of up to $500,000 per year for up to five years. It is intended that HOMINID awards will provide for innovative approaches to long-standing questions about the history of our species. It may also support fuller explorations of these questions through these larger and longer-term awards. Advances in technological capability may also allow for the investigation of questions that were previously unassailable. Infrastructure development is also eligible for support either as a stand alone project or as part of a research award. The intent of this competition is to support projects that go beyond the smaller, shorter duration, single investigator awards that disciplinary programs have been able to provide in the past. Contingent on the availability of funds, the program expects to make two to four awards in fiscal year 2002 and to continue the competition on an annual basis. One goal of the competition is to develop a portfolio of awards that reflects the multiple approaches to the understanding of human origins. It is expected that the combination of awards will complement each other and prove to be mutually informative as they progress.

Cognizant Program Officer(s):

- Dr. Mark Weiss, Physical Anthropology, Program Director, SBE, BCS, 995, telephone: 703-292-7321, e-mail: mweiss@nsf.gov.
- Dr. John Yellen, Archaeology, Program Director, SBE, BCS, 995, telephone: 703-292-8759, e-mail: jyellen@nsf.gov.

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

- 47.075 --- Social, Behavioral and Economic Sciences

ELIGIBILITY INFORMATION

- **Organization Limit:** None
- **PI Eligibility Limit:** None
- **Limit on Number of Proposals:** None

AWARD INFORMATION

- **Anticipated Type of Award:** Continuing Grant
- **Estimated Number of Awards:** Two to four new awards per year
- **Anticipated Funding Amount:** $1 million per year for new awards beginning in FY2002, pending availability of funds

PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

- **Full Proposals:** Supplemental Preparation Guidelines
    - The program announcement/solicitation contains supplements to the standard Grant Proposal Guide (GPG) proposal preparation guidelines. Please see the full program announcement/solicitation for further information.

B. Budgetary Information

- **Cost Sharing Requirements:** Cost Sharing is not required.
- **Indirect Cost (F&A) Limitations:** Not Applicable.
- **Other Budgetary Limitations:** Other budgetary limitations apply. Please see the full program announcement/solicitation for further information.

C. Deadline/Target Dates

- **Letters of Intent (*optional*):** None
- **Preliminary Proposals (*optional*):** None
- **Full Proposal Deadline Date(s):**

February 4, 2002 and first Monday in February thereafter.

D. FastLane Requirements

- **FastLane Submission:** Required
- **FastLane Contact(s):**
    - Fastlane Help Desk, telephone: 800-673-6188, e-mail: fastlane@nsf.gov.

PROPOSAL REVIEW INFORMATION

- **Merit Review Criteria:** National Science Board approved criteria. Additional merit review considerations apply. Please see the full program announcement/solicitation for further information.

AWARD ADMINISTRATION INFORMATION

- **Award Conditions:** Additional award conditions apply. Please see the program announcement/solicitation for further information.
- **Reporting Requirements:** Standard NSF reporting requirements apply.

I. INTRODUCTION

The pathways of change traversed during the course of our species' evolution have fascinated anthropologists, archaeologists and others for decades. The fossil record provides the primary evidence of morphological change over time and archaeological artifacts illuminate behavioral change. Underlying both the behavioral and anatomical change is genetic variation. Describing these changes is a significant goal, yet description is only partially satisfying. Understanding the environmental and ecological context within which these changes occurred, the genetic processes involved, and the evolutionary forces that drove the evolution of our species are strongly compelling issues.

Historically, individual programs such as physical anthropology and archaeology have supported individual researcher projects that have investigated limited aspects of the origins of our species. The scope of these past investigations has been limited by the resources of individual programs as well as by prevailing technology. The Division of Behavioral and Cognitive Sciences which houses the Physical Anthropology and Archaeology Programs, recognizes that at this juncture major advances in our understanding of human evolution can be generated by stimulating larger-scale, multidisciplinary research. In fact, questions that were never imagined to be approachable are now subject to analysis. Biotechnology allows the sequencing of genes present in people living thousands of years ago. Trace element analysis can lead to insights into the paleoenvironments within which our ancestors functioned. Imaging technologies can provide insights into the structure of our ancestors' brain and the development of human cognitive abilities.

Human Origins: Moving in New Directions (HOMINID) is intended to foster large scale integrative research and infrastructure projects through awards up to $500,000 per year and of up to five years in duration. Contingent on availability of funds, it is expected that two to four awards will be made in fiscal year 2002 and that the competition will continue on an annual basis. One goal of the competition is to develop a portfolio of awards that reflects the multiple approaches to the understanding of human origins. It is expected that the combination of awards will complement each other and prove to be mutually informative as they progress.

II. PROGRAM DESCRIPTION

Through the mechanism of substantial long term awards this competition provides an essential complement to "standard" research projects appropriately funded through discipline-based NSF programs. It recognizes that effective pursuit of human origins questions often involves sustained, large scale and integrative, multidisciplinary initiatives and the competition invites researchers to pursue innovative broad scale projects which exceed not only in scale, but also scope, the single investigator projects supported by disciplinary programs. While, given the nature of human origins research, many projects will be multidisciplinary and such approaches are encouraged, this is not a necessary requirement. It is recognized, for example that some research or infrastructure projects, e.g. molecular anthropology laboratory support, dating facility support, long-term paleoanthropological field work, would greatly benefit from significantly greater budgets over longer periods of support than individual programs have been able to provide previously. These too are eligible to compete under the HOMINID program. Proposals which focus on or incorporate infrastructure development into a research design -- for example laboratory support or data base development -- are welcome. Given the multinational nature of much human origins research applicants may include in proposals elements which strengthen international collaboration.

Researchers are encouraged to apply a broad range of approaches and techniques to tightly defined and clearly justified questions of human origins. To illustrate -- but not limit -- the potential range, projects might focus on:

· Construction of relevant chronological geological and environmental contexts
· Examination of extant and past genetic diversity and establishment of data or sample repositories
· The acquisition and analysis of paleontological and archaeological data through, for example, long term fieldwork
· Collaborative development of systems including software and supporting infrastructure applicable to human origins
· Comparative studies of extant humans and other primate species, whether in terms of socioecology, morphology or molecular aspects
· Support to laboratories in multiple disciplines to develop and apply new technologies to the clarification of human origins issues
· Use of new technologies to clarify the evolution of human cognitive skills
· Investigation of the evolution of developmental regimes and control as they relate to human evolution

HOMINID is designed to compliment and not duplicate research currently funded by NSF programs. Contingent on available funds, approximately $1 million will be available annually to permit approximately two new awards, each of up to five years in duration. At the end of the award period, reapplication will be allowed. While the competition does not set absolute minimum and maximum limits, to be competitive the scope of the project must significantly exceed that currently funded at the regular disciplinary programs.

III. ELIGIBILITY INFORMATION

The categories of proposers identified in the Grant Proposal Guide are eligible to submit proposals under this program announcement/solicitation.

IV. AWARD INFORMATION

Estimated program budget, number of awards and average award size/duration are subject to the availability of funds.

Support for the program will be ramped up over a period of five years. An initial programmatic commitment of $1 million per year for 5 years will allow support of approximately two to four continuing grants at a funding level up to $500,000/year. Contingent on availability of funds, the competition will be repeated annually to reach a level of approximately ten awards with an annual program expenditure of $5 million. While the competition does not set an absolute minimum award size eligibility requirement, proposals must significantly exceed, in both scope and dollar amount, historic norms for standard research projects in this area.

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Full Proposal:

Proposals submitted in response to this program announcement/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 Web Site at: http://www.nsf.gov/cgi-bin/getpub?nsf012. Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (301) 947-2722 or by e-mail from pubs@nsf.gov.

Because of the size and duration of the awards, as well as the often interdisciplinary nature of the research or infrastructure supported, up to 5 pages of supplemental material will be allowed beyond the standard 15 page limit. As appropriate, some of these may be used to describe the management structure of the research or infrastructure effort or for maps or tables. Applicants should note the additional review criteria when preparing supplemental material. These pages should be uploaded as Supplementary Documents.

Proposers are reminded to identify the program solicitation number (NSF 01-120) in the program announcement/solicitation block on the proposal Cover Sheet (NSF Form 1207). Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.

B. Budgetary Information

Cost sharing is not required in proposals submitted under this Program Solicitation.

Other Budgetary Limitations: Proposals should include travel funds to participate in a 1.5 day annual meeting of all awardees at NSF.

C. Deadline/Target Dates

Proposals must be submitted by the following date(s):

Full Proposals *by 5:00 PM local time*:

February 4, 2002 and first Monday in February thereafter.

D. FastLane Requirements

Proposers are required to prepare and submit all proposals for this Program Solicitation through the FastLane system. Detailed instructions for proposal preparation and submission via FastLane are available at: http://www.fastlane.nsf.gov/a1/newstan.htm. For FastLane user support, call 1-800-673-6188 or e-mail fastlane@nsf.gov.

Submission of 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 certifications within five working days following the electronic submission of the proposal. Further instructions regarding this process are available on the FastLane website at: http://www.fastlane.nsf.gov.

VI. PROPOSAL REVIEW INFORMATION

A. NSF Proposal Review Process

Reviews of proposals submitted to NSF are solicited from peers with expertise in the substantive area of the proposed research or education project. These reviewers are selected by Program Officers charged with the oversight of the review process. NSF invites the proposer to suggest at the time of submission, the names of appropriate or inappropriate reviewers. Care is taken to ensure that reviewers have no conflicts with the proposer. Special efforts are made to recruit reviewers from non-academic institutions, minority-serving institutions, or adjacent disciplines to that principally addressed in the proposal.

Proposals will be reviewed against the following general review criteria established by the National Science Board. Following each criterion are potential considerations that the reviewer may employ in the evaluation. These are suggestions and not all will apply to any given proposal. Each reviewer will be asked to address only those that are relevant to the proposal and for which he/she 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?

Principal Investigators should address the following elements in their proposal to provide reviewers with the information necessary to respond fully to both of the above-described NSF merit review criteria. NSF staff will give these elements careful consideration 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

It is intended that data and specimens obtained through support via this competition should become rapidly and widely available. Applicants should specifically address the mechanisms and time frame under which they intend to accomplish this goal. Proposals should also indicate the mechanism by which they will ensure that the research is responsive to the needs of interested communities. For infrastructure development, for instance, the establishment of an advisory board may be appropriate. Development of long-term infrastructure should also address the question of project support after the expiration of HOMINID support.

A summary rating and accompanying narrative will be completed and signed 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 Director. In addition, the proposer will receive an explanation of the decision to award or decline funding.

B. Review Protocol and Associated Customer Service Standard

All proposals are carefully reviewed by at least three other persons outside NSF who are experts in the particular field represented by the proposal. Proposals submitted in response to this announcement/solicitation will be reviewed by Mail Review followed by 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.

NSF is striving to be able to tell applicants whether their proposals have been declined or recommended for funding within six months for 70 percent of proposals. The time interval begins on the date of receipt. The interval ends when the Division Director accepts the Program Officer's recommendation.

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 its 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 Division 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.A. 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 (NSF-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 agreement awards also are administered in accordance with NSF Cooperative Agreement Terms and Conditions (CA-1). Electronic mail notification is the preferred way to transmit NSF awards to organizations that have electronic mail capabilities and have requested such notification from the Division of Grants and Agreements.

*These documents may be accessed electronically on NSF's Web site at http://www.nsf.gov/home/grants/grants_gac.htm. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (301) 947-2722 or by e-mail from pubs@nsf.gov.

More comprehensive information on NSF Award Conditions is contained in the NSF *Grant Policy Manual* (GPM) Chapter II, available electronically on the NSF Web site at http://www.nsf.gov/cgi-bin/getpub?gpm. The GPM is also for sale through the Superintendent of Documents, Government Printing Office (GPO), Washington, DC 20402. The telephone number at GPO for subscription information is (202) 512-1800. The GPM may be ordered through the GPO Web site at http://www.gpo.gov.

Special Award Conditions
It is intended that researchers supported through this program will attend an annual PI meeting to discuss both research and management issues.

C. Reporting Requirements

For all multi-year grants (including both standard and continuing grants), the PI must submit an annual project report to the cognizant Program Officer at least 90 days before the end of the current budget period.

Within 90 days after the expiration of an award, the PI also is required to submit a final project report. Approximately 30 days before expiration, NSF will send a notice to remind the PI of the requirement to file the final project report. Failure to provide final technical reports delays NSF review and processing of pending proposals for that PI. PIs should examine the formats of the required reports in advance to assure availability of required data.

NSF has implemented an electronic project reporting system, available through FastLane. This system permits electronic submission and updating of project reports, including information on project participants (individual and organizational), activities and findings, 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.

VIII. CONTACTS FOR ADDITIONAL INFORMATION

General inquiries regarding Human Origins should be made to:

- Dr. Mark Weiss, Physical Anthropology, Program Director, SBE, BCS, 995, telephone: 703-292-7321, e-mail: mweiss@nsf.gov.
- Dr. John Yellen, Archaeology, Program Director, SBE, BCS, 995, telephone: 703-292-8759, e-mail: jyellen@nsf.gov.

For questions related to the use of FastLane, contact:

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

IX. OTHER PROGRAMS OF INTEREST

The NSF *Guide to Programs* is a compilation of funding for research and education in science, mathematics, and engineering. The NSF *Guide to Programs* is available electronically at http://www.nsf.gov/cgi-bin/getpub?gp. General descriptions of NSF programs, research areas, and eligibility information for proposal submission are provided in each chapter.

Many NSF programs offer announcements or solicitations concerning specific proposal requirements. To obtain additional information about these requirements, contact the appropriate NSF program offices. Any changes in NSF's fiscal year programs occurring after press time for the *Guide to Programs* will be announced in the NSF E-Bulletin, which is updated daily on the NSF web site at http://www.nsf.gov/home/ebulletin, and in individual program announcements/solicitations. Subscribers can also sign up for NSF's Custom News Service (http://www.nsf.gov/home/cns/start.htm) to be notified of new funding opportunities that become available.

ABOUT THE NATIONAL SCIENCE FOUNDATION

The National Science Foundation (NSF) funds research and education in most fields of science and engineering. Awardees are wholly responsible for conducting their project activities and preparing the results for publication. Thus, the Foundation does not assume responsibility for such findings or their interpretation.

NSF welcomes proposals from all qualified scientists, engineers and educators. The Foundation strongly encourages women, minorities and persons with disabilities to compete fully in its programs. In accordance with Federal statutes, regulations and NSF policies, no person on grounds of race, color, age, sex, national origin or disability shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving financial assistance from NSF (unless otherwise specified in the eligibility requirements for a particular program).

Facilitation Awards for Scientists and Engineers with Disabilities (FASED) provide funding for special assistance or equipment to enable persons with disabilities (investigators and other staff, including student research assistants) to work on NSF-supported projects. See the program announcement/solicitation for further information.

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, FIRS at 1-800-877-8339.

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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; 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 applicant 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 needing information as part of the review process or in order to coordinate programs; 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," 63 Federal Register 267 (January 5, 1998), and NSF-51, "Reviewer/Proposal File and Associated Records," 63 Federal Register 268 (January 5, 1998). Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

Pursuant to 5 CFR 1320.5(b), an agency may not conduct or sponsor, and a person is not required to respond to an information collection unless it displays a valid 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 this burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to: Suzanne Plimpton, Reports Clearance Officer, Information Dissemination Branch, Division of Administrative Services, National Science Foundation, Arlington, VA 22230, or to Office of Information and Regulatory Affairs of OMB, Attention: Desk Officer for National Science Foundation (3145-0058), 725 17th Street, N.W. Room 10235, Washington, D.C. 20503.

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