NIH GUIDE

For Grants and Contracts

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The NIH Guide announces scientific initiatives and provides policy and administrative information to individuals and organizations who need to be kept informed of opportunities, requirements, and changes in extramural programs administered by the National Institutes of Health.

Vol. 19, No. 32
September 7, 1990

NOTICES

NOTICES OF AVAILABILITY (RFPs AND RFAs)

ONGOING PROGRAM ANNOUNCEMENTS

FINAL RULES - GRANTEE REQUIREMENTS FOR DRUG-FREE WORKPLACE

P.T. 34; K.W. 1014006

Public Health Service

The purpose of this notice is to update the information on this subject published in the April 7, 1989 edition of the NIH GUIDE FOR GRANTS AND CONTRACTS (Vol. 18, No. 12).

Final rules for implementing the Drug-Free Workplace Act of 1988 (Public Law 100-690, Title V, Subtitle D) were published in the FEDERAL REGISTER, Vol. 55, No. 102, Friday, May 25, 1990. The Act requires grantees to certify that they will provide drug-free workplaces; or, in the case of a grantee who is an individual, certify to the agency that his or her conduct of the grant will be drug-free. The required certification is a precondition for receiving a grant from a Federal agency.

Interim final rules on this subject were published in the January 31, 1989 FEDERAL REGISTER (54 FR 4946) and became applicable on March 18, 1989. The final rules amended the interim rules and became effective July 24, 1990. Particularly noteworthy items in the final rules include the following:

- Possible components of an employer drug-free workplace program for grantees are discussed in the Supplementary Information portion of the publication.
- The definition of "employee" has been made more specific. It now includes all "direct charge" and most "indirect charge" employees.
- All grantees, including foreign organizations (except where imposition of this requirement would be inconsistent with the laws or regulations of the foreign government, as determined by the agency head), are required to fulfill the obligations associated with providing a drug-free workplace.
- A drug-free workplace program must be in place within 30 days of the beginning date of the budget period of the grant award.

Implementing regulations for the Department of Health and Human Services (DHHS) are set forth in Title 45, Code of Federal Regulations, Part 76, entitled "Government-Wide Debarment and Suspension (Nonprocurement) and Government-Wide Requirements for Drug-Free Workplace (Grants)."

The current grant application forms Public Health Service (PHS) 398 and 2590 (Revised 10/88, Reprinted 9/89) contain the assurance for a Drug-Free Workplace and identification of the "workplace" site(s). The signature of the OFFICIAL SIGNING FOR APPLICANT ORGANIZATION on the face page of the application constitutes verification that the applicant organization is in compliance with the DHHS regulations, including the necessity to notify the PHS awarding component of a change in the stated workplace site(s). It is extremely important, therefore, that grantees fully understand the contents of the drug-free assurance.

As an aid to grantees' understanding of the assurance, the text of the Certification Regarding Drug-Free Workplace Requirements (Appendix C of the DHHS regulations) is reprinted below in its entirety. It must be realized that the certification is a material representation of fact upon which reliance will be placed by the PHS awarding component. False certification or violation of the certification shall be grounds for suspension of payments, suspension or termination of grants, or government-wide suspension or debarment.

The applicant organization certifies "that it will or will continue to provide a drug-free workplace by:

(a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;

(b) Establishing an ongoing drug-free awareness program to inform employees about:

(1) The dangers of drug abuse in the workplace;

(2) The grantee's policy of maintaining a drug-free workplace;

(3) Any available drug counseling, rehabilitation, and employee assistance programs; and

(4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;

(c) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);

(d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will:

(1) Abide by the terms of the statement; and

(2) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;

(e) Notifying the agency in writing within ten calendar days after receiving notice under subparagraph (d)(2) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to every grant officer or other designee on whose grant activity the convicted employee was working, unless the Federal agency has designated a central point for the receipt of such notices. Notice shall include the identification number(s) of each affected grant;

(f) Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph (d)(2), with respect to any employee who is so convicted:

(1) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or

(2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency;

(g) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a), (b), (c), (d), (e) and (f)." (END OF CERTIFICATION.)

For purposes of paragraph (e) regarding agency notification of criminal drug convictions, the DHHS has designated the following central point for receipt of such notices:

Division of Grants Management and Oversight
Office of Management and Acquisition
Department of Health and Human Services
Room 517-D
200 Independence Avenue, S.W.
Washington, D.C. 20201

NOTICES OF AVAILABILITY (RFPs AND RFAs)

SYNTHESIS OF CONGENERS AND PRODRUGS

RFP AVAILABLE: NCI-CM-17512-28

P.T. 34; K.W. 1003006, 1003012, 0740020

National Cancer Institute

The Drug Synthesis and Chemistry Branch (DS&CB) of the Developmental Therapeutics Program (DTP) of the Division of Cancer Treatment (DCT) of the National Cancer Institute (NCI) is seeking contractors with expertise in chemical synthesis and drug design to synthesize a variety of compounds for evaluation as potential anti-cancer agents. The assigned objectives of this

project are to design and synthesize the following: (a) Congeners of lead compounds having confirmed activity, to enhance activity or potency; (b) Prodrugs with structural modifications that may provide altered pharmacokinetics, altered drug transport, improved bio-availability through increased water solubility, or increased chemical stability; (c) Other altered structures that possess elements of both congener and prodrug; and (d) Compounds related to natural products, e.g., alkaloids, heterocycles, nucleosides, peptides, etc. Each contractor should have available a fully operational facility, including all necessary equipment and instrumentation for all aspects of the contract.

The nature of this project requires that the following restriction be applied: The NCI signs legally binding agreements with certain suppliers (often pharmaceutical or chemical companies) that state that all information on compounds submitted by the supplier will be held confidential. The successful offeror will be expected to synthetically modify such commercially confidential (discreet) materials. Thus, pharmaceutical or chemical companies could obtain valuable data on new lead compounds. Therefore, in order to honor the confidentiality agreement with the original supplier, the NCI believes that the compounds cannot be sent to potential competitors of the supplier, and thus pharmaceutical and chemical companies must be excluded from the competition. The intent of the exclusion is to prevent companies that sell chemicals or drugs on the open market from gaining undue competitive advantage by access to privileged inside information. The exclusion does not apply to companies and/or laboratories whose synthesis activities are performed on a specific order from another party. It is understood that such companies do not sell drugs or chemicals on the open market and are thus not in a position to profit from access to privileged information from NCI.

This is a recompetition of contracts currently held by the Purdue Research Foundation and the Research Foundation of State University of New York at Buffalo. It is anticipated that three cost-reimbursement contracts will be awarded for a period of five years beginning on or about May 31, 1991.

RFP No. NCI-CM-17512-28 will be issued on or about September 17, 1990, and proposals will be due approximately November 30, 1990.

Copies of the RFP may be obtained by sending a written request to:

Ms. Carolyn E. Barker, Contract Specialist
National Institutes of Health
National Cancer Institute
Research Contracts Branch, TCS
Executive Plaza South, Room 603
9000 Rockville Pike
Bethesda, MD 20892
Telephone: (301) 496-8620

FEASIBILITY STUDIES FOR LARGE-SCALE DNA SEQUENCING OF REGIONS OF HIGH BIOLOGICAL INTEREST

RFA AVAILABLE: HG-90-03

P.T. 34; K.W. 0755045, 1004000, 0755018

National Center For Human Genome Research

Letter of Intent Receipt Date: October 15, 1990
Application Receipt Date: December 3, 1990

The National Center for Human Genome Research (NCHGR) invites applications for assistance awards to support feasibility studies using advanced state-of-the-art DNA sequencing technology to accomplish large-scale sequencing projects at a higher rate and lower cost than is currently possible.

This program is described in the Catalog of Federal Domestic Assistance No. 13.172. Awards will be made under the authority of the Public Health Service Act, Sections 301 (Public Law 78-410, as amended 42 U.S.C. 241) and administered under PHS grants policies and Federal Regulations 42 CFR Part 52 and 45 CFR Part 74. This program is not subject to the intergovernmental review requirement of Executive Order 12373 or to Health System Agency review.

BACKGROUND

The NCHGR sponsors basic and applied research concerned with the development and application of new technologies for the characterization and analysis of

the human genome and the genomes of important model organisms. The activities encompassed by the NCHGR program include genetic and physical mapping, DNA sequencing, and informatics related to mapping and sequencing.

With respect to the DNA sequencing component of the Human Genome Program, the rates of sequence acquisition achievable today must be increased at least 10- to 100-fold, and DNA sequencing costs must be reduced at least 10-fold before large-scale sequencing, on the order of a human chromosome, can be considered. To date, current or improved methods have not been used at the megabase level to determine whether, when combined with economies of scale, new strategies, improved automation, and/or new technologies, significant cost reductions are possible. The purpose of this Request for Applications (RFA) is to support investigator-initiated research projects that will extend the limits of advanced state-of-the-art technology considerably further than has yet been attempted.

DEFINITION OF LARGE-SCALE SEQUENCING

The Program Advisory Committee on the Human Genome has suggested that, at the present time, a reasonable definition of a "large-scale sequencing project" is one that attempts to determine on the order of three megabase pairs of (largely) contiguous sequence in three years. Continuity is an important characteristic of the DNA sequence to be obtained; the scientific problems that arise in considering sequencing a one-megabase region are different from those involved in sequencing 1000 one-kilobase regions. The Committee estimated that a rate of 2-5 megabase pairs of DNA sequence per year in the subsequent years should be attainable. Reduction of the cost of DNA sequencing to approximately $0.75 per base pair within three years and to $0.50 per base pair within five years was also recommended to be a reasonable guide. These levels are well beyond anything that has been achieved to date, and applicants are encouraged to consider them as guidelines. The NCHGR encourages discussion of these guidelines by applicants.

DATA MANAGEMENT

Another essential component of DNA sequencing projects that also needs to be investigated on a large scale is data management. It is understood that different sequencing strategies will have different data handling needs and, therefore, no one solution to data management problems for large-scale sequencing is likely. The informatics priorities for this RFA will be primarily directed toward the design, development, and testing of software for data acquisition, assembly, and management.

RESEARCH SCOPE

Projects responsive to this RFA should test hypotheses and new research strategies designed to yield new information on the feasibility of determining large amounts of DNA sequence rapidly and in a cost-effective manner. It is anticipated that such projects will involve an integrated approach that addresses a number of identifiable aspects of the problem, including: 1) The biological materials to be sequenced, e.g., genomic DNA or overlapping clones representing a megabase-sized region. Applicants are encouraged to select DNA comprising regions of high biological interest; 2) scale-up of DNA sequencing technology to allow large-scale, high-throughput, and low-cost acquisition of DNA sequence data; 3) types and rates of errors that are expected; 4) overall strategies, quality control systems, and management plans; 5) data acquisition, data management, sequence assembly, and error estimation.

DATA RELEASE

The policy of the U.S. Public Health Service (PHS) states that "when resources are developed with PHS funds and the associated research findings have been published . . . it is essential that they be made readily available for research purposes to the scientific community." Applicants will be expected to follow this policy. Generating large amounts of DNA sequence will raise additional questions with respect to data release and public accessibility to DNA sequence data because much of this data will never be published in journals or will not be published in its entirety. The NCHGR considers the timely release of data to the scientific community to be critical and encourages applicants to release all sequence data, including those that are not published, to a public database in a timely fashion. Although it will not be used as a review criteria, the NCHGR is interested in the investigator's analysis and evaluation of issues related to the timely release of data such as a timetable for data release, the criteria for "finished" DNA sequence (i.e., sequence that is ready to be publicly released), and the intervals (e.g., number of nucleotides or number of months) at which data will be released.

MECHANISM OF SUPPORT

Support for this program will be through research grants (R01s). Applicants may request up to five years of support. For grants awarded for more than three years, competitive renewals will be due at the end of the third year to allow a determination of whether the project is satisfactorily meeting its stated objectives. As a result of that review, funds may be continued at the level recommended or reduced to phase out the project by the end of the original project period.

An annual meeting is being planned to assist grantees receiving funds under this RFA in maintaining communication with other investigators working on the development of large-scale DNA sequencing methods and in obtaining rapid access to those developments. Funds for travel to this meeting for as many as two investigators may be requested.

The total amount of support available for grants under this RFA (approximately $6 million), is contingent upon the appropriation of funds for this purpose. It is anticipated that up to three awards will be made during fiscal year 1991. There is no set limit on the size of each award. Rather, each investigator should propose a budget adequate to accomplish the work proposed.

LETTER OF INTENT

It is strongly recommended that potential applicants contact NCHGR staff to discuss research objectives. Potential applicants are asked to submit a letter of intent by October 15, 1990. This letter should include a descriptive title of the proposed research, names of principal investigators and other key investigators and their institutions. The letter of intent is requested in order to provide an indication of the number and scope of applications to be reviewed. The letter of intent does not commit the sender to submit an application nor is it a requirement for submission of an application. Letters of intent and requests for the full RFA or additional information should be sent directly to:

Dr. Jane L. Peterson, Chief
Research Centers Branch
National Center for Human Genome Research
Building 38A, Room 610
National Institutes of Health
Bethesda, MD 20892
Telephone: (301) 496-7531
E-mail: jp2@nihcu.bitnet

NATIONAL COOPERATIVE DRUG DISCOVERY GROUPS FOR THE TREATMENT OF OPPORTUNISTIC INFECTIONS ASSOCIATED WITH ACQUIRED IMMUNE DEFICIENCY SYNDROME

RFA AVAILABLE: AI-90-10

P.T. 34; K.W. 0715008, 0740018, 0740020, 0755025, 1002008

National Institute of Allergy and Infectious Diseases

Letter of Intent Receipt Date: October 1, 1990
Application Receipt Date: December 10, 1990

The National Institute of Allergy and Infectious Diseases (NIAID) announces availability of a Request for Applications (RFA) for funding of the National Cooperative Drug Discovery Groups for the Treatment of Opportunistic Infections Associated with Acquired Immune Deficiency Syndrome (NCDDG-OI). It is the purpose of this RFA (available upon request) to invite applications aimed at the discovery of therapeutic agents to treat infections caused by opportunistic pathogens associated with AIDS. Applications that include research projects or core components from the private sector (e.g., pharmaceutical, chemical, or biotechnological companies) are encouraged.

Opportunistic infections are the major causes of morbidity and mortality in AIDS patients. Due to the complexity of managing these infections, the medical and hospitalization costs of HIV-infected individuals are enormous. Available drugs to treat the opportunistic infections are of limited utility because of toxicity and other adverse reactions. Therefore, the need exists for potent and selective therapeutic agents active against the opportunistic infections (OIs). The purpose of this RFA is to encourage investigators from diverse fields and expertise to collaborate and explore new avenues utilizing the recent advances in molecular biology. Units in which these research talents and resources are combined are termed "NATIONAL COOPERATIVE DRUG DISCOVERY GROUPS" (NCDDGs). The NCDDG programs would provide a mechanism for

a formalized collaboration between scientists from universities, pharmaceutical companies, and Government. They are envisioned as having the capacity to generate new approaches and strategies for the treatment of opportunistic infections in AIDS patients and to rapidly translate their concepts into potentially effective treatments. The NCDDG can be focused in one area (synthetic, biochemical, biological) or be a combination of the above approaches (comprehensive) in composition. Results from the research proposed should be used to identify and develop information for long-term planning of potential therapeutic approaches or to recommend new potential treatments worthy of further development in clinical trials.

The NCDDG-OI initiative has evolved as a part of the NCDDG Program on AIDS (now referred to as NCDDG-HIV). The NCDDG-HIV Program, launched in 1986, has funded 27 groups whose research efforts are directed towards the identification of more selective and effective agents to treat HIV infection. The studies supported by the NCDDG-HIV Program have led to the identification of several potential new therapeutic agents. The NCDDG-OI initiative, first launched in 1989, seeks to stimulate investigations leading to the identification and preclinical development of agents active against the various pathogens causing opportunistic infections in AIDS patients. Six groups have been funded in the first round of awards.

Recent advances in molecular biology, biochemistry, and pathogenesis provide avenues for innovative approaches. The NCDDG-OI Program will provide assistance to talented scientists to interact as a unit to carry out the preclinical research essential for the realization of project objectives. An NCDDG-OI could be composed of scientists from a combination of academic, non-profit research, and commercial organizations. Each NCDDG-OI will be assembled by the Principal Investigator to form a multidisciplinary consortium representing the various skills needed to successfully design, synthesize, and evaluate, at the preclinical level, potential therapeutic agents useful in the treatment of opportunistic infections in AIDS patients. Specifically excluded from the Group's activities are studies related to clinical evaluation of the drug.

Projects or cores with proposed animal model development or efficacy testing in animal models must be integrated within the major goal of targeted drug discovery and be required to attain the Group's objectives. Funds for evaluation of new agents in animal models will be withheld until compounds generated by the Group are available for animal efficacy studies and be limited to 25 percent effort of the Group. NOTE: Animal component(s) may be requested by the NIAID to evaluate in animal models compounds other than their own. When this occurs, and in the event that this has not already been done, the necessary funds for evaluation will be released. Projects utilizing non-random screening of natural products, biologics, and/or synthetic compounds must not exceed 25 percent of the total effort of the Group. Large-scale random screening of compounds will not be supported under this RFA.

Awards will be made as Cooperative Agreements. The Cooperative Agreement funding mechanism differs from the traditional research grant in that the Government component (NIAID) awarding the Cooperative Agreement anticipates substantial programmatic involvement during performance. The nature of NIAID staff participation is described in the RFA. However, the Principal Investigator must define his/her objectives in accord with his/her own interests and perceptions of approaches to the treatment of AIDS-associated opportunistic infections.

The applicant institution and the Principal Investigator will be responsible for the Group's application. Awards will be made to the applicant institution on behalf of the group as a whole and not to individual research projects within the Group. The applicant institution will provide a Central Operations Office for the Group. The applicant institution will be responsible for the performance of the entire Group and will be accountable for the funds awarded. The participation of the Government through the NIAID extramural staff is aimed at facilitating a concerted effort by all members of the Group by making available to the Group biological materials for testing, appropriate existing data bases, ancillary testing, and other resources available under existing contracts and to provide appropriate scientific input. The interaction of academic and non-profit research institutions with commercial organizations and Government is expected to favor efficient invention of agents active against OIs in AIDS patients and will facilitate their subsequent development for clinical trials.

NIAID anticipates making multiple awards for periods up to five years and has set aside $2.0 - 2.5 million total costs for the first year's funding. The amount spent will be dependent on the continuing availability of funds for this purpose and the quality and diversity of approved applications.

For a copy of this RFA, please contact:

Ms. Barbara Gunter
Developmental Therapeutics Branch
Division of AIDS
National Institute of Allergy and Infectious Diseases
6003 Executive Boulevard, Room 243P
Bethesda, MD 20892
Telephone: (301) 496-8197

NATIONAL COOPERATIVE DRUG DISCOVERY GROUPS FOR THE TREATMENT OF HUMAN IMMUNODEFICIENCY VIRUS INFECTION

RFA AVAILABLE: AI-90-09

P.T. 34; K.W. 0715008, 0740020, 0755025

National Institute of Allergy and Infectious Diseases

Letter of Intent Receipt Date: October 1, 1990
Application Receipt Date: December 6, 1990

The National Institute of Allergy and Infectious Diseases (NIAID) announces availability of a Request for Application (RFA) for funding of the National Cooperative Drug Discovery Groups for the Treatment of Human Immunodeficiency Virus Infection (NCDDG/HIV). It is the purpose of this RFA (copies available upon request) to invite applications aimed at the discovery of more effective, selective, and diverse new agents that can be used for the treatment of HIV, the etiological agent associated with Acquired Immunodeficiency Syndrome (AIDS).

Applications that include a research project or a core component from the private sector (e.g., pharmaceutical, chemical, or biotechnological companies) are encouraged. Research directed toward drug discovery in the following areas will be considered responsive to this RFA: humoral and cellular arms of the immune system; immune-based therapies; structure, biophysical and biological properties of cellular or viral proteins; biochemistry of viral-host interactions; inhibitors of enzymatic functions and biochemical pathways; repressors of HIV regulatory elements; drug metabolism; drug targeting (peptides, nucleic acids, and other compounds); gene delivery using viral vectors; ribozymes as repressors of HIV gene function; emergence of drug-resistant strains and ways to counteract it; viral and cellular parameters associated with neurological dysfunction; and discovery, biochemical and biological characterization of promising natural products or synthetic chemical compounds.

Projects or cores with proposed animal model development or efficacy testing in animal models must be integrated into and required to attain the Group's objectives. Funds for evaluation of new agents in animal models will be withheld until compounds generated by the Group are available for animal efficacy studies. If proposed, efforts directed to the synthesis or development of analogues of known anti-HIV nucleosides (which includes pharmacology and testing in cell-based assays) must not exceed 25 percent of the total effort of the Group. Projects utilizing non-random cell-based assays for screening natural products, biologics, and/or synthetic compounds must not exceed 25 percent of the total effort of the Group.

For reasons stated below, the following research areas currently under intense investigation or that have already been integrated into other NIH initiatives are excluded from this RFA: (i) lipophilic carriers of nucleosides; (ii) prodrugs of known anti-HIV nucleosides; (iii) evaluation of recombinant human cytokines; (iv) development of soluble CD4 or its conjugated congeners; (v) large-scale random screening of compounds with potential activity against HIV in cell culture-based systems; such a program is operated by the National Cancer Institute; (vi) research on the opportunistic infections associated with AIDS; a separate RFA for the National Cooperative Drug Discovery Groups for the Treatment of Opportunistic Infections Associated with AIDS (NCDDG-OI) is being re-issued.

Each NCDDG/HIV will be assembled by the Principal Investigator to form a multi-disciplinary consortium representing the various skills needed to successfully design, implement, and evaluate, at the preclinical level, therapeutic entities and strategies for the treatment of AIDS. Inasmuch as it is unlikely that all of the outstanding talents required to exploit fundamental leads from various scientific disciplines will be found in a single institution, each Group is envisioned as being multi-institutional as well. Thus, each NCDDG/HIV will consist of a number of research projects

representing the scientific disciplines required to attain the Group's goal and objectives. The various research projects, including that of the Principal Investigator, may be mobilized from academia, research institutions, and/or industry. It is expected that the rationale for design of potential treatments, the synthesis of specific agents, and the preclinical models for evaluation will originate within the Group and be based on leads from their own and others' fundamental research. Specifically excluded from the Group's activities are activities related to clinical evaluation of the drug.

Awards will be made as Cooperative Agreements. The Cooperative Agreement funding mechanism differs from the traditional research grant in that the Government component (NIAID) awarding the Cooperative Agreement anticipates substantial programmatic involvement during performance. The nature of NIAID staff participation is described in the RFA. However, the applying Group must define its objectives in accord with its own interests and perceptions of approaches to combat HIV infection.

The proposed applicant institution will be responsible for the Group's application. Awards will be made to the applicant's institution on behalf of the Group as a whole and not to individual research projects within the Group. The applicant institution will provide a Central Operations Office for the Group. The applicant institution will be responsible for the performance of the entire Group and will be accountable for the funds awarded. The active participation of the Government through the NIAID extramural staff is aimed at enhancing and expediting a concerted effort by the Group by making available biological materials for testing, appropriate existing data bases, and appropriate ancillary testing and other resources available under existing contracts. The interaction of academic and non-profit research institutions with commercial organizations and Government is expected to promote innovative discoveries of anti-HIV treatment and will facilitate their subsequent development to clinical trial.

Applications will be reviewed by the appropriate subcommittee of the NIAID AIDS Research Review Committee. NIAID has set aside $2.5 million for the initial year's funding. The amount spent will be dependent on the continuing availability of funds for this purpose and the quality and diversity of approved applications.

This RFA is available from:

Ms. Barbara Gunter
Developmental Therapeutics Branch
Division of AIDS
National Institute of Allergy and Infectious Diseases
6003 Executive Boulevard
Bethesda, MD 20892
Telephone: (301) 496-8197

ONGOING PROGRAM ANNOUNCEMENTS

NATIONAL INSTITUTE ON DRUG ABUSE - ANNOUNCEMENT AND GUIDELINES - AUGUST 1990

PA: PA-90-31

P.T. 34; K.W. 1002030, 1002019, 1002008, 1003002, 0710080, 0404009, 0785055

National Institute on Drug Abuse

PURPOSE

The purpose of this announcement is to update the National Institute on Drug Abuse's (NIDA) General Announcement and Guidelines to reflect the priorities for the current fiscal year.

RESEARCH OBJECTIVES

Applications for drug abuse research support will be considered in the following areas:

(1) Basic biomedical and neuroscientific research at the genetic, molecular, organ, and system level; (2) Biochemistry, pharmaceutical/medical chemistry, and metabolic and pharmacokinetic studies; (3) Epidemiology and natural history (etiology) of drug abuse; (4) Treatment research; (5) Prevention research; (6) Behavioral and clinical pharmacology research; (7) AIDS and drug abuse; and (8) Drug abuse in the workplace.

MECHANISMS OF SUPPORT

Support mechanisms include: (1) Research Projects (R01), (2) Small Grants (R03), (3) Conference Grants (R13), (4) First Independent Research Support and Transition Awards (R29), (5) Small Business Innovation Research Grants (SBIR-R43 and R44), (6) Program Projects (P01), and (7) Research Demonstration and Dissemination Projects (R18--This program will be announced through a specific request for applications (RFA)).

In addition, NIDA employs a variety of support mechanisms that undergird the research training and professional development of clinicians and scientists upon whom future drug abuse research will depend. These include: (1) Predoctoral and Postdoctoral Individual National Research Service Awards (F31 and F32), (2) Institutional National Research Service Awards (T32), (3) MARC Undergraduate NRSA Institutional Grants (T34), and (4) Research and Scientist Development Awards (K02, K05, K20 and K21).

IMPORTANT - The receipt date appearing later in this announcement are for either project grant mechanism (R01) or AIDS special receipt dates. All other research support mechanisms listed above may have their own: (1) receipt and review date schedule; (2) special programmatic considerations for funding priority.

ELIGIBILITY

Application for research grants may be made by any public or private non-profit or for-profit institution such as universities, colleges, hospitals, laboratories, and units of state or local government, and eligible agencies of the Federal Government. Women and minority populations are encouraged to apply.

INCLUSION OF MINORITIES IN STUDY POPULATIONS

Applicants are required to give added attention (where feasible and appropriate) to the inclusion of minorities in study populations for research into the etiology of diseases, research in behavioral and social sciences, clinical studies of treatment and treatment outcomes, research on the dynamics of health care and its impact on disease, and appropriate interventions for disease prevention and health promotion. If minorities are not included in a given study, a clear rationale for their exclusion should be provided.

INCLUSION OF WOMEN IN STUDY POPULATIONS

Applicants are required to consider the inclusion of women in the study populations for all clinical research efforts. Exceptions would be studies of diseases that exclusively affect males or where involvement of pregnant women may expose the fetus to undue risks. Gender differences should be noted and evaluated. If women are not to be included, a clear rationale should be provide for their exclusion.

In order to provide more precise information to the treatment community, it is recommended that publications resulting from Alcohol, Drug Abuse, and Mental Health Administration-supported research in which the study population was limited to one sex for any reason other than that the disease or condition studied exclusively affects that sex, should state, in the abstract summary, the gender of the population studied, e.g., "male patients," "male volunteers," "female patients," or "female volunteers."

APPLICATION PROCEDURES

Applicants should use the grant application form PHS 398 (Rev. 10/88). The title and number of this Program Announcement "NIDA-General Announcement, PA-90-31," should be typed in item number 2 of the face page of the PHS 398 application form. Please identify any AIDS-related application according to specific instructions included in the application kit, or that are contained elsewhere in this announcement, or that have been identified through previous communications in the NIH Guide to Grants and Contracts.

Application kits containing the necessary forms and instructions may be obtained from offices of sponsored research at most universities, colleges, medical schools, and other major research facilities. If such a source is not available, the following office may be contacted for the necessary material: Grants Management Branch, NIDA, Room 8A-54, 5600 Fishers Lane, Rockville, MD 20857, (301) 443-6710.

The signed original and six (6) permanent legible copies of the completed non-AIDS application and the signed original and 24 permanent legible copies of the AIDS applications should be sent to:

Division of Research Grants, NIH
Westwood Building, Room 240
Bethesda, MD 20892**

RECEIPT AND REVIEW SCHEDULE

Receipt Dates New/Renewal	Initial Review	Advisory Council Review	Earliest Start Date
June 1/July 1*	Oct./Nov.	Jan./Feb.	April
Oct. 1/Nov. 1*	Feb./Mar.	May/June	July
Feb. 1/Mar. 1*	May/June	Sept./Oct.	Dec.

* Amended applications (new or renewal are to be submitted on these dates.

EXPEDITED AIDS APPLICATION RECEIPT AND REVIEW SCHEDULE

AIDS receipt dates (or all new, competing, revised and supplemental AIDS applications, irrespective of type of activity, i.e., R01, R13, R29, P50, etc.).

Receipt Dates New/Renewal	Initial Review	Advisory Council Review	Earliest Start Date
Jan 2*	Feb./Mar.	May/June	June
May 1*	June/July	Sept./Oct.	Nov.
Sept 1*	Oct./Nov.	Jan./Feb.	Feb.

* These receipt dates do not apply to those AIDS Program Announcements or RFAs which specify alternate receipt dates. AIDS applications received after the above dates will be held until the next AIDS special review cycle.

REVIEW PROCESS

The Division of Research Grants, NIH, serves as a central point for receipt of applications for most discretionary PHS grant programs. Applications received under this announcement will be assigned to an Initial Review Group (IRG) in accordance with established PHS Referral guidelines. The IRGs, consisting primarily of non-Federal scientific and technical experts, will review the applications for scientific and technical merit. Notification of the review recommendations will be sent to the applicant after the initial review.

Applications will receive a second-level review by a National Advisory Council whose review may be based on policy as well as scientific merit consideration. Only applications recommended for approval by the Council may be considered for funding.

AWARD CRITERIA

Applications recommended for approval by an appropriate Advisory Council will be considered for funding on the basis of overall scientific and technical merit of the research as determined by peer review, program needs and balance, and availability of funds.

INQUIRIES

Contacts for Program Information:

Director, Division of Preclinical Research
Room 10A-31
Telephone: (301) 443-1887

Director, Division of Clinical Research
Room 10A-38
Telephone: (301) 443-6697

Director, Division of Epidemiology and Prevention Research
Room 11A-55
Telephone: (301) 443-6637

Director, Division of Applied Research
Room 9A-54
Telephone: (301) 443-6780

The street address for the above is

5600 Fishers Lane
Rockville, MD 20857

This program is described in the Catalog of Federal Domestic Assistance No. 13.279. Grants will be awarded under the authority of Section 301 of the Public Health Service Act, as amended (42 USC 241) and administered in accordance with the PHS Grants Policy Statement and Federal regulations at 42 CFR Part 52 and 45 CFR Part 74. This program is not subject to the intergovernmental review requirements of Executive Order 12372 or Health System Agency review.

NEURAL AND BEHAVIORAL BASES OF COGNITIVE CHANGE WITH AGE

PA: PA-90-32

P.T. 34; K.W. 0710010, 1002030, 0414005

National Institute on Aging

The Neuroscience and Neuropsychology of Aging Program of the National Institute on Aging (NIA) is soliciting applications for research and training grants on the neural and psychological mechanisms underlying cognition in aging.

The purpose of this program announcement is to broaden the scope of cognitive research on aging into the realm of cognitive neuroscience. Research that is being encouraged should take advantage of theoretical and experimental advances in the fields of cognitive science and neuroscience and apply them to questions of aging. The use of any model system, including computational, animal, or human, may be appropriate if it will help elucidate the mechanisms of cognitive change that can occur with aging and experience. While studies addressing questions of cognitive aging from either neuroscience or cognitive science perspectives are encouraged, studies that link neuroscience and cognitive science approaches to aging are particularly desirable in as much as they can help clarify the interdependence of brain functions and behavioral capacities in aging.

I. BACKGROUND

Although the search to understand brain/behavior interactions has a long history, fundamental questions remain unanswered. In particular, the biological and psychological mechanisms underlying cognition, and how cognitive processes are altered by age and experience are not fully understood. Understanding the processes of cognition in aging is a critical first step in dissociating the effects of normal aging from those due to disease. In addition, better understanding of cognitive processes in aging is necessary for planning therapeutic interventions, appropriately utilizing skills and expertise, and specifying the requirements of an aging society in the home and workplace. Older adults constitute the fastest growing segment of populations world-wide. In order to appreciate their abilities, expertise, needs and impairments, and ultimately to extend their functioning, it is necessary to develop a better understanding of the mechanisms inherent to cognitive change in aging.

The Neuroscience and Neuropsychology of Aging Program, NIA, already supports research on cognitive aging through investigator-initiated applications. Cognitive research currently being supported includes human studies on learning, semantic and contextual memory, selective and visual attention, and music perception in normal aging and in dementing disorders, as well as animal studies such as an examination of neurobehavioral relations in senescent hippocampus.

It is the intent of this program announcement to stimulate additional research in the area of cognition that will further extend our present understanding of cognitive processes in aging. At present, questions pertaining to cognitive aging are typically addressed along two parallel tracks: neuroscientists use molecular biological, neurochemical, or neurophysiological techniques to define the structural and functional alterations and plastic adaptations that can occur with brain aging; and psychologists use behavioral techniques to study the sparing and loss of cognitive and perceptual capacities that can occur with aging and develop theories and models of cognitive processes. In a sense, these studies are limited in that questions of brain structure and function are often addressed independently from questions of behavior. Stronger linkage between descriptions of information processing, specifications of brain activity, and behavior is necessary if we are to

understand the mechanisms underlying cognitive changes throughout the aging process.

II. SCOPE

Applications in response to this program announcement might address questions such as how processes such as attention, perception, memory, language, problem solving, or psychomotor functions are controlled or regulated by neural or psychological mechanisms and how they are affected by normal aging and/or experience. Studies can draw on recent developments in imaging technology, computer science, linguistics, clinical and basic neuroscience, and cognitive and neuropsychology, and may use human, animal, or computational models. Investigators that address cognition from the perspective of psychosocial and environmental influences on cognitive functioning in aging should refer to the program announcement from the Behavioral and Social Research Program of NIA, Cognitive Functioning and Aging (NIH Guide for Grants and Contracts, Vol. 16, No. 41, December 18, 1987).

The following is a partial list of topics covered by the present program announcement. It is not meant to be an exhaustive list. All innovative and relevant work on cognitive aging is welcome.

Examples of research areas include:

- the nature of the cognitive capacities that appear to decline with aging versus those that appear to remain intact or improve with age or experience and their relationship to neural processes;
- applicability of brain imaging (e.g., PET, MRI, MEG), neurophysiological (e.g., ERP, EEG), and noninvasive neuropsychological methods to questions of cognitive aging;
- development of computational models at all levels of analysis ranging from those that model age-associated changes at a single neuronal level to those studying Hebbian synapses, field effects, or applying connectionist modeling to questions of altered cognitive organization in aging;
- interplay of sensation, perception, and cognition in older individuals; examination of structural or functional and behavioral changes that occur in the aging brain, and the consequences of these changes on perceptual integration; studies of the compensatory and adaptive strategies that are used in older individuals;
- attentional systems responsible for sustaining and shifting attention and how these are affected by aging; examination of age-related changes in the basal forebrain, thalami, and other subcortical modulatory systems as well as cortical areas and neural systems involved in attention, arousal, and alertness;
- sparing and loss of linguistic processes in older adults;
- recall and recognition memory changes in aging and their relation to brain structural and functional changes, including long-term potentiation;
- differences between changes in contextual memory, working memory, and prospective memory that can occur in aging and their relation to cortical and subcortical changes;
- neural and psychological bases for age-associated changes in aspects of implicit memory, skill learning, and classical conditioning with aging;
- relative stability of semantic memory and intact lexical and semantic priming with aging and the correspondence of these capacities to the relative integrity of more posterior cortical areas in aging; studies exploring the neural instantiation of memory subtypes as they are currently conceptualized (e.g., procedural vs. declarative and implicit vs. explicit) and the applicability of these concepts to the functional changes observed in aging;
- physiological underpinnings of priming, the maintenance of this memory sub-system in healthy older adults, and the loss of priming in some demented patient populations

- development of sensitive and specific clinical tests for memory or cognitive assessment;

- reasoning, concept formation, and problem solving ability in aging, including questions of how the effects of experience are manifested by alterations in neural systems, structures, and processes with aging.

III. MECHANISMS OF SUPPORT

The support mechanisms for research proposals in this area are the individual research project grant (R01), the program project (P01), and the First Independent Research Support and Transition (FIRST) award (R29). The support mechanisms for training proposals in this area are the Postdoctoral Individual National Research Service Award (F32), the National Research Service Award for Senior Fellows (F33), career grants (K series awards), and the Institutional National Research Service Training award (T32). Under these mechanisms, the principal investigator and any participating investigators will plan, direct, and perform the research or research training.

APPLICATIONS AND REVIEW PROCEDURES

Applications must be prepared on form PHS 398 (Revised 10/88) or the appropriate training/fellowship application forms using instructions included in the application kit. These kits are available from the Office of Sponsored Research of most institutions and from the Division of Research Grants, National Institutes of Health, Westwood Building, Room 449, Bethesda, MD 20892. Additional application guidelines for NIA P01 applications should be obtained from the NIA address cited below.

Receipt dates for new research project (R01s and P01s), FIRSTs, and the K series applications are February 1, June 1, and October 1. Receipt dates for training applications (F32s, F33s, and T32s) are January 10, May 10, and September 10.

To identify responses to this announcement, check "yes" and put "Neural and Behavioral Bases of Cognitive Change with Age, PA-90-32" under item 2 of page 1 of grant applications submitted in response to this program announcement. Use the mailing label provided in the application kit and mail the signed original and six copies to:

Division of Research Grants
National Institutes of Health
Westwood Building, Room 240
Bethesda, MD 20892**

R01s, FIRSTs, and Fs will be reviewed for scientific and technical merit by appropriate study sections in the Division of Research Grants. P01s, K awards other than the K04s, and T32s will be reviewed by an appropriate Institute review group. Secondary review will be by the appropriate national advisory council. For further information, potential applicants are strongly encouraged to call or write:

Deborah L. Claman, Ph.D.
Program Director, Neuropsychology of Aging
Neuroscience and Neuropsychology of Aging
National Institute on Aging
National Institutes of Health
Building 31, Room 5C35
Bethesda, MD 20892
Telephone: (301) 496-9350

The NIH requires applicants to include, where feasible and appropriate, women as well as men and minorities in the study of populations for all clinical and research efforts and to analyze, where appropriate, differences between these populations. If women and minorities are not to be included, a clear rationale for their exclusion should be provided.

This program is described in the Catalog of Federal Domestic Assistance. Awards will be made under the authority of the Public Health Service Act, Section 301 (42 USC 241) and administered under PHS grant policies and Federal Regulations 42 CFR Part 52 and 45 CFR Part 74. This program is not subject to review by a Health Systems Agency.

**THE MAILING ADDRESS GIVEN FOR SENDING APPLICATIONS TO THE DIVISION OF RESEARCH GRANTS OR CONTACTING PROGRAM STAFF IN THE WESTWOOD BUILDING IS THE CENTRAL MAILING ADDRESS FOR THE NATIONAL INSTITUTES OF HEALTH. APPLICANTS WHO USE EXPRESS MAIL OR A COURIER SERVICE ARE ADVISED TO FOLLOW THE CARRIER'S REQUIREMENTS FOR SHOWING A STREET ADDRESS. THE ADDRESS FOR THE WESTWOOD BUILDING IS:

5333 Westbard Avenue
Bethesda, Maryland 20816

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