

NIH GUIDE

**For Grants
and
Contracts**

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**U.S. DEPARTMENT OF HEALTH
AND HUMAN SERVICES**

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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.

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NOTICES

CLARIFICATION: REFERENCE LETTERS FOR RCDA AND FIRST GRANT APPLICATIONS

P.T. 34; K.W. 0710030, 1014002

Division of Research Grants

The announcement in the March 18, 1988, issue of the NIH Guide for Grants and Contracts (Vol. 17, No. 10) instructed applicants to use the reference forms in the PHS 398 Kit. Only the RCDA has reference guidelines included in the PHS 398 Kit to be sent to referees. For the FIRST grant application, there are no special reference forms or printed guidelines to be sent to referees.

PHS POLICY RELATING TO DISTRIBUTION OF UNIQUE RESEARCH RESOURCES PRODUCED WITH PHS FUNDING

P.T. 36; K.W. 0780010

National Institutes of Health

Investigators conducting biomedical research frequently develop unique research resources. Categories of these resources include organisms, cells, viruses, cell products, cloned DNA, as well as DNA sequences, mapping information and crystallographic coordinates. Some specific examples are: specialized and/or genetically defined cells, including normal and diseased human cells; monoclonal cell lines; hybridoma cell lines; microbial cells and products; viruses and viral products; recombinant nucleic acid molecules; DNA probes; nucleic acid and protein sequences; and transgenic mice. The Public Health Service (PHS) provides the following statement of policy concerning unique research resources developed through its awards.

A. PHS Policy on Distribution of Research Resources.

It is the policy of the PHS to make available to the public the results and accomplishments of the activities that it funds. Restricted availability of unique resources upon which further studies are dependent can impede the advancement of research and the delivery of medical care. Therefore, when these resources are developed with PHS funds and the associated research findings have been published or after they have been provided to NIH under contract, they should be made readily available for research purposes to the scientific community. This policy applies to NIH intramural research as well as extramural research funded by grants, and cooperative agreements, and contracts.

Investigators who have such resources are encouraged to consult the appropriate PHS Program Administrators who may be of assistance in determining a suitable distribution mechanism. For research and development contracts, approval should be obtained from the NIH Contracting Officer before distribution of unique resources, unless the terms of the contract permit distribution without prior clearance of the Contracting Officer. In order to facilitate the availability of unique or novel biological materials and resources developed with PHS funds, investigators may distribute the materials through their own laboratory or institution or submit them, if appropriate, to entities such as the American Type Culture Collection or similar repositories. In the case of unique biological information such as DNA sequences or crystallographic coordinates, investigators are expected to submit them to the appropriate data banks because they otherwise are not truly accessible to the scientific community. When distributing unique resources, investigators are encouraged to include pertinent information on the nature, or quality, or characterization of the materials.

Investigators must exercise great care to ensure that resources do not identify original donors or subjects, directly or through identifiers, such as codes linked to the donors or subjects.

B. Distribution Costs

Institutions and investigators may charge the requester, if necessary, for the reasonable cost of production of unique biological materials, and for packaging and shipping. Such costs may include personnel, supplies, and other directly related expenses. It should be noted, however, that such a charge accrues as general program income. This should not be an impediment to the distribution of materials, but investigators and institutions are advised that:

a) for grants, the income is governed by 45 CFR Part 74 and it must be reported on the Financial Status Report. Questions regarding these policies and the treatment of income should be directed to the Grants Management Officer.

b) for contracts, the income is governed by Federal Acquisition Regulations (FAR) 45.610-3. Contracting Officers must be contacted before generating any revenues from the distribution of materials. Any contract under which research resources would be sold require specific contract instructions. Existing contracts may require an amendment and specific approval of the Contracting Officer to render them allowable.

C. Inventions and Commercialization

This policy does not discourage, impede or prohibit the organization that develops unique biologic materials or intellectual property from commercializing the materials or licensing them for commercial purposes. Investigators may make their materials available to others with appropriate restrictions and licensing terms as they and their institutions deem necessary.

Institutions are reminded that some of these products may be inventions subject to the various laws and regulations applicable to patents and need to be reported. When reporting is required, it should occur at the earliest possible time. (See P.L. 96-517 P.L. 98-620 and 37 CFR 401)

DATED ANNOUNCEMENTS (RFPs AND RFAs)

INFORMATION SYSTEMS BRANCH AUTOMATED DATA PROCESSING (ADP)

RFP AVAILABLE: NHLBI-HO-88-08

P.T. 18, 38; K.W. 1004017

National Heart, Lung, and Blood Institute

The overall objective of this contract is to analyze, design, implement, document, maintain, and program seven mainframe and microcomputer applications and systems over a five-year period. These seven systems are: 1) Tracking and Budget System (TABS); 2) Contracts Tracking and Budget System (CTABS); 3) TABS Microcomputer Budget System; 4) Trans-National Institute of Health (NIH), Basic/Applied/ Developmental, and Private Sector Microcomputer System; 5) Council Microcomputer System; 6) National Program Microcomputer System, and 7) Computer Retrieval of Information and Scientific Projects (CRISP) Microcomputer System.

Proposals must clearly present plans detailing the technical approaches, procedures, and time schedules for completing the five performance stages for each of the seven projects. These performance stages are: 1) Analysis; 2) Evaluation; 3) Design/Specification; 4) Programming; and 5) Testing/Implementation. New systems and/or modifications to existing systems shall be thoroughly tested and documented before implementation, and system users are to be trained by the contractor.

Offerors will be asked to present plans for training staff in the use of the seven computer projects. Design and implementation of microcomputer systems must also address the fact that systems implemented on individual microcomputers will be moved to Local Area Networks (LANs) as they become operational.

It is anticipated that four full-time equivalents with the following expertise will be required for the successful completion of the study: 1) a senior programmer/analyst with managerial skills to serve as project manager; 2) a senior programmer/analyst; and 3) two programmers.

This announcement is not a request for proposal (RFP). It is anticipated that RFP-NHLBI-HO-88-08 will be available on or about September 1, 1988, with proposals due on November 1, 1988. To receive a copy of the RFP, please supply this office with three (3) self-addressed mailing labels. The RFP package will be available upon written request to:

Joanne C. Paolucci
Contract Specialist for
Division of Lung Diseases
Contracts Operations Branch
Westwood Building, Room 654
Bethesda, Maryland 20892

This proposed program is totally 100 percent set aside for small business competition. Only responsible small business firms as defined pursuant to Part 19 of the Federal Acquisition Regulation are asked to respond to this synopsis. The Standard Industrial Classification Number is 7379.

MINORITY HIGH SCHOOL STUDENT RESEARCH APPRENTICE PROGRAM

P.T. 34, 44, FF; K.W. 0720005

Division of Research Resources

Application Receipt Date: December 1, 1988

BACKGROUND AND OBJECTIVES

The Division of Research Resources (DRR), National Institutes of Health (NIH) currently plans to continue the Minority High School Student Research Apprentice Program in 1989.

The purpose of the program is to provide minority high school students with a meaningful experience in various aspects of health-related research in order to stimulate their interest in careers in science.

ELIGIBILITY

Eligible institutions are those that were awarded grants during the latest complete Federal fiscal year 1988 from either the Biomedical Research Support Grant (BRSG) Program or the Minority Biomedical Research Support (MBRS) Program, both of which are administered by DRR, NIH. Only one application for the Apprentice Program can be submitted by a component of an institution that is the recipient of both the BRSG and MBRS awards.

Students eligible for support under this program are those who: (1) identify themselves as minority (i.e., Black, Hispanic, American Indian, Alaskan Native, Pacific Islander, or Asian); (2) are U.S. citizens or have a permanent visa; and (3) are enrolled in high school during the 1988-89 academic year. (Students who will graduate from high school in 1989 are eligible, as is a student who participated in a previous year - provided he/she is still enrolled at the high school level.)

MECHANISM OF SUPPORT

The mechanism of support for this program will be the NIH grant-in-aid. Support will be provided at a level of \$1,500 for each apprentice position allocated. No indirect costs will be paid. Direct support to the apprentice must be as salary; stipends are not allowed. Within the \$1,500 per student allocation, funds may also be utilized for supplies, extending the research experience, or if adequate funds exist, for the addition of an apprentice. However, funds from these grants may only be used for the costs of the apprentice program. The Program Director is responsible for recruitment and selection of the apprentices and assignment of each to an investigator. Recruitment and selection of students should emphasize factors of the students' motivation, ability and scholastic aptitude and accomplishments. In addition, consideration should be given to science teachers' recommendations and where possible the degree of parental commitment. Assignments should be made to investigators involved in health-related research who are committed to developing in the high school students both understanding of the research in which they participate and the technical skills needed.

APPLICATION

Eligible institutions should submit an application consisting of no more than:

1. A one-page letter stating the number of student positions requested, plus
2. An original and two signed and completed copies of the Grant Application Form, PHS 398 (Rev. 09/86) face page only.

Mark the "YES" box in item 2 and indicate the announcement title as "Minority High School Student Research Apprentice Program."

Mark items numbered 4, 5, 7, 8b, 10 and 14 Not applicable (N.A.). Complete item 8a with the total dollar amount of your request, which is the sum of the number of student positions requested times \$1,500 per student.

The original and one copy of the signed Program Director's report and each student report should be submitted with the renewal application due December 1 annually in order that the data contained in these reports can be used by DRR to decide about policies and future funding for the Minority High School Student Research Apprentice Program. These reports should also be submitted at the same time even if renewal support is not requested.

In any event, all reports including the Financial Status Report must be submitted to the NIH by the grantee institution no later than May 31, 1989 unless an extension of the budget period end date has been authorized.

Please Note: Limited funds and increased requests for such student positions may restrict the final allocations by DRR to three or four students per eligible applicant institution. Upon recommendation of the National Advisory Research Resources Council, the Division will give preference in making awards to those institutions that can support a summer program having a "critical mass" of at least five or six students using institutional as well as DRR funds.

The applications should be submitted to:

Biomedical Research Support Program
Division of Research Resources
National Institutes of Health
Building 31, Room 5B-23
9000 Rockville Pike
Bethesda, Maryland 20892

Inquiries can be made of Dr. Marjorie A. Tingle at the above indicated address or by calling (301) 496-6743.

The firm deadline for receipt of applications is December 1, 1988. Awards will be effective March 1, 1989, contingent upon availability of appropriated funds.

EPIDEMIOLOGIC STUDIES OF HIV-ASSOCIATED MALIGNANCIES

RFA AVAILABLE: 88-CA-16

P.T. 34; K.W. 1002045, 0715035, 0785055

National Cancer Institute

Letter of Intent Receipt Date: November 4, 1988

Application Receipt Date: December 19, 1988

INTRODUCTION

The Extramural Programs Branch, Epidemiology and Biostatistics Program, Division of Cancer Etiology, National Cancer Institute, is inviting grant applications from interested investigators for epidemiologic studies to establish the incidence rates, natural history, and etiology of malignancies in individuals at elevated risk for human immunodeficiency virus (HIV) infection. This RFA announcement is for a single competition with a deadline of December 19, 1988 for receipt of applications. Applications should be prepared and submitted in accordance with the aims and requirements described in the complete RFA document and summarized in the following sections.

RESEARCH GOALS AND SCOPE

The objective of the proposed RFA is to encourage epidemiologic research into the etiology of HIV-associated malignancies. Questions of interest include: whether any epidemiologic risk factor patterns or laboratory analyses suggest a mechanism of carcinogenesis in contrast to other clinical outcomes of HIV infection; the relationship between the specific expression of immune alteration in HIV-infected individuals and development and progression of cancer; the effect of HIV antigenic variation and coinfection with other viruses on the development of specific malignancies; the determinants of international variation in incidence of HIV-related malignancies; the relationship of acquired immunodeficiency syndrome (AIDS) prophylaxis and treatments, and related immune alterations, to tumor development and progression; the determinants of the latency period between exposure to

initiating agent(s) and development of premalignant conditions or malignancy; and the effects of drug and chemical exposures.

Investigations considered responsive to the proposed RFA include, but are not limited to:

- o Epidemiologic studies, in the diverse groups at elevated risk for HIV infection, comparing individuals who develop malignancies to those with other outcomes of HIV infection;
- o Epidemiologic studies comparing individuals with HIV-associated tumors to those with nonepidemic tumors of the same pathologic type, including those occurring in other immunosuppressed states; or
- o Epidemiologic studies of malignancies occurring in individuals receiving treatment for AIDS with particular attention to treatment-related immune alterations.

MECHANISM OF SUPPORT

The mechanism of support for this RFA will be the traditional National Institutes of Health (NIH) research project grant. Responsibility for the planning, direction and execution of the proposed research will be solely that of the applicant. The total project period for applications submitted in response to the present RFA should not exceed five years. Approximately \$1,500,000 will be set aside in FY89 to fund applications which are submitted in response to this RFA. It is anticipated that at least four or five applications will be funded. This funding level is dependent on the receipt of a sufficient number of applications of high scientific merit. The earliest feasible start date for the initial awards will be June 1, 1989. Although this program is provided for in the financial plans of the National Cancer Institute (NCI), the award of grants pursuant to this RFA is contingent upon the availability of funds for this purpose. Non-profit and for-profit institutions are eligible to apply. Foreign as well as domestic institutions are eligible. The present RFA announcement is for a single competition with a deadline of December 19, 1988 for receipt of applications. PHS grant policies governing regular research project grants apply to applications received in response to this request.

INQUIRIES

A copy of the complete RFA describing the research goals and scope, the review criteria, and the procedure for applying can be obtained by sending two self-addressed mailing labels to:

G. Iris O Abrams, M.D., Ph.D.
Extramural Programs Branch
Epidemiology and Biostatistics Program
Division of Cancer Etiology
National Cancer Institute
Executive Plaza North, Room 535
Bethesda, Maryland 20892
Telephone: (301) 496-9600

STUDIES OF CHRONOBIOLOGICAL EFFECTS IN CANCER TREATMENT WITH BIOLOGICAL RESPONSE MODIFIERS AND/OR DRUGS

RFA AVAILABLE: 88-CA-19

P.T. 34; K.W. 0715035, 0745005, 0740015, 1002000

National Cancer Institute

Application Receipt Date: December 12, 1988
Letter of Intent Receipt Date: October 7, 1988

The Biological Response Modifiers Program (BRMP) and the Cancer Therapy Evaluation Program (CTEP) of the Division of Cancer Treatment (DCT) of the National Cancer Institute (NCI) request grant applications from interested investigators for well-focused studies relating timing variables to increased efficacy of cancer treatment with BRMs and/or cytotoxic agents.

BACKGROUND

Chronobiology is the study of the effect of periodic variations and cycles of time on biological phenomena. In the field of cancer treatment, preclinical

and clinical chronobiological studies have resulted in observations of significant effects on the tumor response and on toxicity of at least 15 different therapeutic agents when the circadian schedules of treatment were varied. The basis for these findings is for the most part unknown but cell cycle kinetics and accompanying cell physiological changes, variations in pharmacokinetics, diurnal changes in growth and other factors may play an important role. By understanding the differences in the circadian dependence of the response of normal and tumor cells to therapeutic agents, anti-tumor effects may be optimized while toxicity to normal tissue may be minimized during cancer therapy.

OBJECTIVE AND SCOPE

Proposals in response to this RFA should focus on in vitro and in vivo preclinical investigations of chronobiological effects on tumor therapy using BRMs and/or drugs. Hypotheses to be tested must have a solid basis and must be studied in clinically relevant tumor-bearing animal models. Clinical protocols are not responsive to this RFA but supportive laboratory assays which measure chronobiological effects in ongoing clinical studies are responsive.

The following areas of cancer therapy investigation are encouraged:

- o In vivo chronocytokinetic studies relating the timing of administration and dose of BRMs and/or drugs with the cell cycle of tumor cells or developing bone marrow and other precursor cells.
- o Chronopharmacokinetic studies in animal models of BRMs and/or drugs. Studies which include adoptive immunotherapy are encouraged.
- o Chronobiological effects on lethal or organ toxicity of BRMs and/or drugs.
- o Chronobiological effects on host effector functions.

In all studies proposed, the anti-tumor effect of the agent must be measured. Hypotheses to be tested must be addressed by employing well-defined, well-controlled, reproducible immunological and biological assays in order to provide a rigorous experimental basis for understanding chronobiological effects in cancer therapy using BRMs and/or drugs. New and novel approaches which may include collaboration between investigators in several disciplines is encouraged. The long-term goal is the development of clinical protocols based upon the findings resulting from these studies.

MECHANISM OF SUPPORT

Grants may be awarded to profit and nonprofit organizations and institutions, governments and their agencies, and occasionally to individuals. Support for this program will be through the National Institutes Of Health (NIH) grant-in-aid (R01). Approximately \$500,000 in total costs per year for 5 years will be committed to specifically fund applications which are submitted in response to this RFA. It is anticipated that 2 to 3 awards will be made. This funding level is dependent on the receipt of a sufficient number of applications of high scientific merit. The total project period for applications submitted in response to the present RFA should not exceed 5 years. The earliest feasible start date for the initial awards will be July 1, 1989.

REVIEW PROCEDURES AND CRITERIA

Applications in response to this RFA judged to be both competitive and responsive will be reviewed according to the review criteria stated below for scientific and technical merit by a single appropriate peer review group convened by the Division of Extramural Activities, NCI. The final review by the National Cancer Advisory Board considers the special need of the Institute and the priorities of the National Cancer Program.

The present RFA announcement is for a single competition with a specified date of December 12, 1988 for receipt of applications. Future renewal applications will be considered as unsolicited grant applications which will compete with other unsolicited applications received by the NIH.

Review criteria include the extent of relevance and/or contribution of the proposed research to the overall goals and objectives of the RFA, the significance and originality of the project from a scientific and technical viewpoint, feasibility of the research and adequacy of the experimental design, the adequacy of time which the investigator(s) and staff would devote

to the proposed studies, the experience, training and research competence of the investigator(s), adequacy of available facilities, and provision for the adequate protection of human subjects and the humane care of animals.

INQUIRIES

Requests for copies of the RFA in its expanded form should be addressed to:

Dr. Toby T. Hecht
Program Director, BRMP, DCT, NCI-FCRF
Building 321, Room 7A
Frederick, Maryland 21701-1013
Telephone: (301) 698-1098

LETTER OF INTENT

Although a letter of intent is not required, prospective applicants are asked to submit, by October 7, 1988, a letter of intent that includes a descriptive title of the proposed research, the name and address of the principal investigator, the names of the other key personnel, the participating institutions, and the number and title of the RFA in response to which the application is being submitted.

The letter of intent should be sent to Dr. Toby T. Hecht at the above address.

SMOKING CESSATION STRATEGIES FOR MINORITIES

RFA AVAILABLE: 88-HL-26-P

P.T. 12, 34, FF; K.W. 040419

National Heart, Lung, and Blood Institute

Application Receipt Date: January 23, 1989

The Prevention and Demonstration Research Branch (PDRB) of the Division of Epidemiology & Clinical Applications (DECA), National Heart, Lung, and Blood Institute (NHLBI) announces the availability of a Request for Applications (RFA) on the above subject. Copies of the RFA are available from staff of the NHLBI. Awards will be made to foreign institutions only for research of very unusual merit, need, and promise.

Smoking remains the chief preventable cause of cardiovascular and respiratory disease and death among Blacks, Hispanics, Asians, and Native Americans as it is for all Americans. Among some minorities, high rates of smoking or high prevalence of other cardiovascular disease risk factors are reflected in smoking-related mortality rates suggesting the need for minority-specific cessation approaches. Language or cultural barriers may inhibit the success of currently-available smoking cessation programs. However, little is known about smoking cessation strategies that might be most effective in achieving increased rates of smoking cessation in a defined minority population. Consequently, tailored smoking cessation programs are needed to meet particular needs of minorities in reducing smoking-related morbidity and mortality.

This program invites grant applications for demonstration research projects to develop and test minority-specific strategies for recruitment to smoking cessation, for achieving cessation, and/or for maintaining smoking abstinence. Applications must include cardiovascular disease or respiratory disease variables in the proposed research design.

This solicitation may be of interest to investigators from a broad range of disciplines such as epidemiology, public health, cardiology, physiology, pulmonology, sociology, psychology, health education, and communication sciences. Multidisciplinary approaches involving several specialties are appropriate. Applicants must demonstrate access to a defined target population, a control or comparison group, and expertise within the proposed team to carry out research sensitive to the sociocultural elements or language needs of a minority population. It is anticipated that up to five grants, of three years each, will be awarded under this program with total first year costs for all grants of \$1,750,000.

Request for copies of the RFA should be addressed to:

Katrina W. Johnson, Ph.D.
PDRB, DECA, NHLBI, NIH
Federal Building, Room 604
7550 Wisconsin Avenue
Bethesda, Maryland 20892
Telephone: (301) 496-3503

PARTURITION: MYOMETRIAL FUNCTION AND RELATED MECHANISMS

RFA AVAILABLE: 88-HD-17

P.T. 34; K.W. 0710115, 0710110, 0785135

National Institute of Child Health and Human Development

Application Receipt Date: December 5, 1988

The NICHD invites grant applications to support basic research on human parturition with particular emphasis on: (1) myometrial physiology and biochemistry; (2) mechanisms of action of agents already known or thought to be involved in the contractile events of parturition; (3) biomolecular interactions between choriontrophoblast and uterine epithelium, and the potential importance of paracrine/ autocrine control systems; (4) the roles of agents which promote uterine preparedness for parturition, including factors that favor remodeling of connective tissue of the uterus and fetal membranes; (5) similarities and differences in biomolecular processes involved in myometrial function and control in preterm labor.

MECHANISM OF SUPPORT

Support will be available through the traditional research grant (R01). Support for grants is contingent upon receipt of appropriated funds. It is anticipated that 10-12 meritorious applications will be funded under this program.

APPLICATION PROCEDURE

Application must be submitted on form NIH 398 (Revised 9/86).

ADDITIONAL INFORMATION

Potential applicants are encouraged to request a detailed request for application by telephoning:

Pregnancy and Perinatology Branch
Center for Research for Mothers and Children
National Institute of Child Health and Human Development
EPN, Room 643
6130 Executive Boulevard
Bethesda, Maryland 20892
Telephone: (301) 496-5576

CYSTIC FIBROSIS RESEARCH CENTERS

RFA AVAILABLE: 88-DK-13

P.T. 04; K.W. 0715135, 1002019

National Institute of Diabetes and Digestive and Kidney Diseases

Application Receipt Date: January 13, 1989

The Division of Diabetes, Endocrinology, and Metabolic Diseases of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), announces a national competition for awards to establish a limited number of Cystic Fibrosis Research Centers for the purpose of investigating the etiology, pathophysiology, and treatment of cystic fibrosis.

I. BACKGROUND

Cystic fibrosis (CF) is the most common lethal genetic disorder in the Caucasian population. It is inherited as an autosomal recessive trait and many patients die within the first two decades of life. The clinical syndrome appears as a generalized dysfunction of exocrine glands or epithelial surfaces and is characterized by elevated sweat electrolytes, secretion of highly

viscous mucus, pulmonary infections, and progressive loss of function in the lungs, pancreas, liver, intestines, and other organs.

The CF gene has been localized to within 300,000 DNA base pairs of a gene-linkage marker on the long arm of chromosome 7. Research efforts are now focused on identifying the CF gene and the protein which it encodes. It is hoped that isolation of the defective gene responsible for cystic fibrosis will elucidate the underlying biochemical defect(s). It is also hoped that identification of the CF gene will lead to methods of identifying its asymptomatic carriers and ultimately to a neonatal screening technique for the general population. Research in CF has led to the hypothesis that a diminished negative ion permeability in the distal sweat duct underlies the elevated sweat concentrations of sodium chloride considered diagnostic for the disease. It is postulated that in normal cells, chloride follows sodium passively via a chloride/bicarbonate exchange or by a chloride ion channel. In CF, this antiport/channel or its regulation is defective with sodium only being partially reabsorbed resulting in high sodium and chloride ion concentrations and low bicarbonate ion concentrations in the sweat duct lumen. Recent results suggest that the problem in cystic fibrosis relates not to the presence or absence of the chloride ion conductance but to the regulation of this conductance by a cyclic AMP dependent process.

These rapid advances were made possible by application of new state-of-the-art techniques of molecular and cell biology to the study of CF. With support through Cystic Fibrosis Research Centers, scientists can pursue exciting current opportunities to advance fundamental understanding of the pathogenesis of CF and ultimately, therapy of the disease.

In FY 1988, an RFA for CF Centers was jointly issued by NIDDK and NHLBI. NIDDK now seeks to further expand its CF Centers Program and thus is issuing another RFA for CF Centers.

II. RESEARCH GOALS AND SCOPE

The overall goal of a Cystic Fibrosis Research Center is to stimulate a multidisciplinary approach aimed at promoting advances in basic science research on the cellular and molecular mechanisms underlying cystic fibrosis and the integration and application of this knowledge to clinical investigations. CF Centers should have a central theme to which all constituent projects relate and which serves as an integrating force to achieve an overall common goal. Emphasis in proposed projects should be on the exploration of basic mechanisms underlying CF, the elaboration of new and significant hypotheses, and the generation of novel strategies for approaching current clinical and fundamental issues.

The scope of research that could meet the goals of the CF Center program includes: 1) identification, cloning, and characterization of the CF gene and its protein product; 2) studies aimed at defining etiological factors and pathogenetic mechanisms; 3) investigations into the relationship between the genetic defect(s) and the resulting pathophysiology; 4) development of improved conditions for routinely growing and passaging CF cells and development of immortalized CF cell lines, facilitating studies presently hampered by a scarcity of cells; 5) development of reliable phenotypic markers characteristic of CF cells in culture, besides chloride impermeability; 6) studies focused on biochemical and molecular aspects of the regulation of ion transport in epithelial cells such as characterization of the intermediates involved in chloride channel regulation; 7) development and evaluation of new and/or improved therapeutic approaches effective in alleviating the clinical symptoms of the disease; 8) development of gene replacement therapy or antisense RNA as possible therapeutic modalities; 9) development of diagnostic tests useful for carrier assessment and prenatal screening; 10) studies of growth and development and of strategies for optimizing growth and development in children with CF; 11) studies of the effects of CF on specific organs and systems and development of therapies directed at organ-specific disease manifestations.

The key elements of NIDDK's CF Center Program include: (1) basic and clinical research projects; (2) research cores providing shared resources such as: techniques, instruments, tissues, patient populations, and research seminars; and (3) pilot and feasibility studies.

III. MECHANISM OF SUPPORT

Support for this program will be through a center grant. Successful applicants will direct and carry out the center's research projects. However, any substantive modifications in that program must be mutually agreed on by the center director, the grantee institution, and NIDDK. It is anticipated that NIDDK will support two additional centers at a level not to exceed

\$800,000 per year per Center including indirect costs. These awards will be made for five years and the progress of each Center will be evaluated annually.

IV. APPLICATION AND REVIEW PROCEDURES

The applications for centers solicited in this announcement will be evaluated in national competition by a special review committee. Deadline for the receipt of the applications will be January 13, 1989. Applications received after that date will be considered unacceptable and returned to the applicant. Prospective applicants are strongly encouraged to submit a letter of intent by December 9, 1988. Applications deemed by Institute staff not to meet the published guidelines will be judged unacceptable and will be returned to the applicant.

V. INQUIRIES

Potential applicants must request CF Center Guidelines from:

Nancy Lamontagne, Ph.D.
Cystic Fibrosis Program Director
Westwood Building, Room 607
NIDDK, NIH
Bethesda, Maryland 20892
Telephone: (301) 496-4980

ONGOING PROGRAM ANNOUNCEMENTS

IMMUNOGERONTOLOGY PROGRAM

P.T. 34, 44; K.W. 0710010, 0710070

National Institute on Aging

INTRODUCTION

The Molecular and Cell Biology Branch (MCBB) of the National Institute on Aging (NIA) has responsibility for an extramural program of research and training in immunology as related to aging. The program has been active for several years and has resulted in a number of advances in the field, including a better delineation of the behavior of the immune system in aging and an understanding of the specific deficits of various components of the immune system that occur in senescence.

It has been well established that immune function declines with advancing age. Given the complexities of the immune system, however, it would be useful to know the details of the age-related loss of immune function and identify the primary causes of the decline of the immune responsiveness. The relationship between the immune system and the aging process is also an appropriate field of scientific inquiry. It has been proposed that the decline or deregulation of the immune system is a primary cause of aging or a pace-setter of the aging process. Research is also indicated in the pathological consequences of the age-related changes in the immune system, such as decreased resistance to pathogens and tumors, and increased propensity for autoimmunity and immunopathology. Another area of research that should be encouraged concerns the means to prevent or correct the immunologic deficits of aging.

SPECIFIC OBJECTIVES

The NIA invites qualified researchers to submit applications for research and research training in all areas of immunology as it relates to aging. The following topics are illustrative of appropriate research areas. However, applications need not be limited to the issues listed below. Proposals to study the aging of the immune system in humans, animals or cell cultures are welcome.

- o Age-related changes in molecules involved in specific antigen recognition (B-cell and T-cell receptors, MHC-encoded molecules) and in lymphocyte and macrophage activation;
- o Age-related changes in biochemical processes leading to lymphocyte and macrophage activation;
- o Age-related changes in the production of lymphokines and other cytokines (and their receptors) involved in the immune response;

- o Age-related changes in the regulation of the immune response (e.g., regulatory cells, the idiotypic network);
- o Immune response to infectious agents and to vaccines in senescence;
- o Generalized immunosuppression due to viral, protozoal, and bacterial infections in aged individuals;
- o Effects of drugs on the immune system of older people;
- o Immunity to tumors in aged individuals;
- o Immunologic tolerance, autoimmunity, and immunopathology in senescence;
- o Age-related behavior of pathological manifestations of autoimmunity;
- o Attempts to prevent or reverse the immunologic deficits of aging by immunotherapy (e.g., immune augmentation, biological response modifiers);
- o Attempts to prevent or reverse the immunologic deficits of aging through cellular or genetic engineering;
- o Gender-related differences in any of the above areas of research.

APPLICATION AND REVIEW PROCEDURES

The primary mechanisms for support of this program are:

- o Research grant (R01)
- o Program Project Award (P01)
- o First Independent Research Support and Transition (FIRST) Award (R29)
- o Career grants, which include: Research career development award (K04) Clinical investigator award (K08)
- o Training grants (T32)
- o Fellowships (F32, F33)

Research project grant (R01 and R29) applications, fellowships (F32, F33) and research career development awards (K04) will be reviewed for scientific and technical merit by an appropriate study section in the Division of Research Grants. All other applications will be reviewed by an appropriate review group. Secondary review will be by the National Advisory Council on Aging or another appropriate advisory council.

There are no set-aside funds for funding these applications. Applications compete on the basis of scientific merit with all other applications. The review criteria are the traditional considerations underlying scientific merit.

Researchers considering an application in response to this announcement are encouraged to discuss their project, and the range of grant mechanisms available, with NIA staff in advance of formal submission. This can be done either through a telephone conversation or a brief letter giving the descriptive title of the proposed project and identifying the principal investigator and, when known, other key participants. Applications related to the health of women and minorities are particularly encouraged.

Applicants should use the regular research project and program project grant application form (PHS 398 Rev. 9/86), available at the applicant's institutional Application Control Office or from:

Office of Grants Inquiries
 Division of Research Grants
 Westwood Building, Room 449
 National Institutes of Health
 Bethesda, Maryland 20892
 Telephone: (301) 496-7441

To expedite the application's routing within NIH, please check the box on the face sheet of the application indicating that your proposal is in response to

this announcement and type (next to the checked box) NIA: Immunogerontology Program. In assigning applications to NIA or other Institutes, accepted referral guidelines will be followed.

Mail the cover letter and the completed application (with 6 copies) to:

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

Receipt dates for Research Grant, Program Project Grant, Career Award and First Award applications are February 1, June 1, and October 1; those for Training Grant and Fellowship applications are January 10, May 10, and September 10.

Correspondence and inquiries should be directed to:

Immunology Program Administrator
Building 31, Room 5C21
National Institute on Aging
Bethesda, Maryland 20892
Telephone: (301) 496-6402

EFFECT OF ENVIRONMENTAL AGENTS ON THE ENDOCRINE SYSTEM

P.T. 34; K.W. 1007003, 0705030, 0785050, 1007009

National Institute of Environmental Health Sciences

Application Receipt Dates: February 1, June 1, October 1

I. BACKGROUND

The National Institute of Environmental Health Sciences (NIEHS) is the principal Federal funding agency for support of basic research on environmental factors that contribute to human health problems and disease. Major emphasis by NIEHS is placed upon research examining those physical and chemical substances resulting from industrial progress. However, there are also many natural environmental substances which have been found to have deleterious effects on human health and also are within the purview of the NIEHS mission. Many of these substances cause human health problems by disrupting normal endocrine homeostasis which in turn can lead to a disease state.

Synthetic chemicals have been identified which interfere with mixed function oxidase activity of the adrenal cortex, disrupting the steroidogenic capabilities of this gland and interfering with normal physiological response to stress. Exposure to external radiation has been demonstrated to increase the risk of thyroid cancer, and radioactive iodine uptake by the thyroid can lead to thyroid dysfunction. Our current technology poses a myriad of physical factors (radiation, microwaves, etc.) which also may have deleterious consequences on human health brought about through the disruption of one or more endocrine systems. Several foods contain hormone-like substances (e.g., alfalfa has a thyroid releasing hormone-like factor; oats have substances that mimic luteinizing hormone-releasing hormone), and many plants contain compounds which are estrogenic. These represent but a few examples of environmental substances that are capable of upsetting endocrine balance. Thus, it is the intent of this revised program initiative to further identify specific problems related to chemical, physical, and biological agents of environmental concern, and to study their effects on endocrine function.

II. RESEARCH GOALS AND SCOPE

This announcement is issued to encourage investigator-initiated research toward and to foster research activity in environmental endocrinology (i.e., the interaction of environmental agents with and their effects on the endocrine glands, hormones, and target cell function). Collaborative research efforts between endocrinologists and toxicologists or scientists in closely related disciplines are especially encouraged.

Research interests include, but are not limited to, studies of: 1) the direct and indirect effect of environmental agents on the endocrine and neuroendocrine system, 2) the blocking of hormone release by environmental agents, 3) chemical interference of hormone activity at target cell sites, 4) hormonal-like actions of environmental agents, mycotoxins and other environmental pollutants, 5) the effect or role of hormones on the metabolism

and toxicity of chemicals, and 6) development and standardization of more sensitive tests for detecting early damage by environmental agents.

III. MECHANISM OF SUPPORT

The mechanism of support for this activity will be the individual research grant - Research Project Grant and FIRST Award as applicable.

IV. APPLICATION AND REVIEW PROCEDURES

A. Deadline

Applications will be accepted in accordance with the usual receipt dates for new research grant applications; i.e., February 1, June 1, and October 1. The earliest possible award dates will be approximately nine months after the respective receipt dates. Applications received too late for one cycle of review will be held until the next receipt date.

B. Method of Applying

Applications will be received by the NIH's Division of Research Grants (DRG) and referred to an appropriate study section for scientific and technical merit review. Institute assignment decisions will be governed by normal programmatic considerations as specified in the NIH Referral Guidelines. The review criteria customarily employed by the NIH for regular research grant applications will prevail. Following the initial scientific review, the applications will be evaluated by the National Advisory Environmental Health Sciences Council or another appropriate Institute council.

Applications should be submitted on form PHS-398 (revised 9/86) which is available in the business or grants and contract offices at most academic and research institutions or from the DRG. To identify the application as a response to this announcement, check "yes" in Item 2 on the face page of the application and enter the title "Effects of Environmental Agents on the Endocrine System."

The original and six (6) copies of the application should be directed to:

Applications Receipt Office
Division of Research Grants
National Institutes of Health
Westwood Building, Room 240
Bethesda, Maryland 20892

Inquiries related to this Program Announcement should be directed to:

Dr. Jerry A. Robinson
Program Administrator
Scientific Programs Branch
Division of Extramural Research and Training
National Institute of Environmental Health Sciences
P. O. Box 12233
Research Triangle Park, North Carolina 27709
Telephone: (919) 541-7724

To better ensure appropriate Program and Institute assignment, applicants should submit a letter of intent and/or a copy of the application face page to the Program Administrator, NIEHS.

RESEARCH ON SEVERELY MENTALLY ILL PERSONS AT RISK OF OR WITH HIV INFECTIONS

P.T. 34; K.W. 0715095, 0715045, 1002045

National Institute of Mental Health

The National Institute of Mental Health (NIMH) requests applications for Research on Severely Mentally Ill Persons At Risk of or with HIV Infections. The purpose of these awards is to encourage investigator-initiated research on the risk of HIV infections in severely mentally ill persons, and on the management of seropositivity in those with severe mental illness. This research will assess the risks of developing HIV infections among this population and test the effectiveness of methods to reduce the risk or to manage those who have already become infected. Applicants may request support for a period of up to 5 years. In fiscal year 1989, it is estimated that up to \$2,000,000 will be available to support new grant awards under this announcement. NIMH will accept applications in response to this announcement under the Public Health Service receipt dates for AIDS applications, beginning

January 2, 1989. Potential applicants interested in obtaining further information should contact:

Dave Larson, M.D., M.S.P.H.
Biometric and Clinical Applications Branch
Division of Biometry and Applied Sciences
National Institute of Mental Health
Room 18C-14
5600 Fishers Lane
Rockville, Maryland 20857
Telephone: (301) 443-1330