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## For Grants and Contracts

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DATED ANNOUNCEMENTS (RFPs AND RFAs)

IMMUNOLOGICAL AND BIOLOGICAL CONSEQUENCES OF GENETIC VARIATION OF HIV AND RELATED IMMUNODEFICIENCY VIRUSES

RFP AVAILABLE: RFP-NIH-NIAID-AIDSP-89-5

P.T. 34; K.W. 0715008, 0715120, 1002045, 0710070

National Institute of Allergy and Infectious Diseases

The Vaccine Research and Development Branch, AIDS Program, NIAID, NIH, has a requirement for contractors to immunologically and biologically characterize at least five, and up to ten, virus strains derived from molecularly cloned HIV and related immunodeficiency viral genomes.

This NIAID-sponsored project will take approximately five (5) years to complete. A cost reimbursement contract is anticipated. It is anticipated that two (2) awards will be made.

This is an announcement for an anticipated Request for Proposal (RFP). RFP-NIH-NIAID-AIDSP-89-5 will be issued on or about December 15, 1988, with a closing date tentatively set for February 2, 1989.

Requests for the RFP should be directed in writing to:

Ms. Ann Linkins  
Contract Management Branch  
Westwood Building, 5333 Westbard Avenue, Room 707  
National Institute of Allergy and Infectious Diseases  
National Institutes of Health  
Bethesda, Maryland 20892

To receive a copy of the RFP, please supply this office with two (2) self-addressed mailing labels. All responsible sources may submit a proposal which will be considered.

This advertisement does not commit the Government to award a contract.

PURIFICATION, ISOLATION, AND CHARACTERIZATION OF GONADAL POLYPEPTIDES

RFP AVAILABLE: NICHD-CD-89-10

P.T. 34; K.W. 0760060, 1003002, 1003008

National Institute of Child Health and Human Development

The Contraceptive Development branch of the Center for Population Research, National Institute of Child Health and Human Development, has a requirement for the purification, isolation, and characterization of new gonadal polypeptides which play a role in the regulation of reproductive functions. The goal of this contract program is the structural elucidation of these gonadal polypeptides. Partially purified material(s) will be made available for biological evaluation (after independent verification of the biological activity) and will be distributed to the scientific community. It is anticipated that three awards be made under the RFP for a period of three years, each.

Offerors will be required to propose the gonadal polypeptide factor(s) to be pursued. The isolation of the factor(s) to be pursued will be limited to those present in porcine follicular fluid (pFF).

Offerors are not required to have, in-house, all of the capabilities to purify, isolate, biologically characterize and chemically characterize (including primary structure determination) the proposed factors. Documented collaboration under a subcontract is encouraged but the prime contractor must be able to conduct, in-house, the necessary biological assays to follow the activity of the factor(s) proposed for purification and isolation. The biological collaboration will also allow for the broader aspects of identifying other potentially important factor(s) in pFF.

This is not a Request for Proposals. The RFP will be issued on or about December 23, 1988 with a due date approximately 90 days thereafter. Copies of the RFP may be obtained by sending written requests to the following address. Please enclose a self-addressed label.

Paul J. Duska, Contracting Officer  
Contracts Management Section, OGC  
National Institute of Child Health and Human Development  
Executive Plaza North, Room 610  
Bethesda, Maryland 20892

PATHOGENESIS AND NATURAL HISTORY OF HUMAN PAPILLOMA VIRUSES

RFA AVAILABLE: 89-AI-02

P.T. 34; K.W. 0715125, 1002045, 0765033, 0715182, 0710070

National Institute of Allergy and Infectious Diseases

Application Receipt Date: March 9, 1989

Letter of Intent Date: February 1, 1989

BACKGROUND INFORMATION

The National Institute of Allergy and Infectious Diseases (NIAID) wishes to expand its support of research on sexually transmitted human papilloma viruses (HPV) and invites applications for program project grants to be initiated during FY 1989 for a continuing program of research on HPV of the male and female genitalia. Emphasis of research will be on the natural history of infection, the biology of the viruses, pathogenesis and the immune responses.

RESEARCH GOALS AND SCOPE

The incidence of infection with HPV among sexually active women appears to be increasing at an alarming rate. Although many of these infections subside without clinical detection, others do progress to condylomata acuminata (flat warts), cervical dysplasia, and even neoplastic conditions that could become malignant. In addition, there is evidence that HPV infections of the genitalia may predispose individuals to infections with human immunodeficiency virus (HIV). HPV isolated from humans have not been successfully cultivated in vitro and do not elicit active infections in other animals. Therefore, studies of the structure and biology of HPV have necessitated the use of technologies developed with other papilloma viruses that are more easily manipulated in the laboratory. HPV genes have been cloned by recombinant DNA techniques, sequenced and gene products expressed in vitro. Antibodies and other immune responses to these gene products can be elicited and studied in animals. However, there is yet no satisfactory system described for evaluating the immune responses in terms of recovery from or protection against infection. Further, there are many other aspects of the natural history of the human infection that remain to be elucidated.

The NIAID encourages multidisciplinary approaches to further our knowledge of the incidence, epidemiology, and pathogenesis of HPV and the associated host immune responses to infection that may lead to development of strategies for prevention and control of this often silent but insidious sexually transmitted disease. It is expected that proposals will include a clinical component with access to a patient population and clinical specimens. They also may include subprojects on the biology of HPV, treatment modalities, epidemiology, immunology, and behavioral aspects related to transmission and/or disease manifestation. Immunologic and pathogenesis studies may include animal models with other papillomaviruses that have relevance to the immune response to HPV in humans.

MECHANISM OF SUPPORT

Competition is open for two awards for program projects. Total direct and indirect costs should not exceed \$800,000 each. No currently funded STD Research Unit supported by NIAID will be competing for these awards. Domestic institutions, medical colleges, hospital laboratories and other public or private institutions, including state and local government units, are eligible to apply. Interinstitutional collaborations or consortia, either domestic or foreign, may be allowed where necessary.

Projects can be supported for up to five years without additional competition contingent upon availability of funds.

APPLICATION PROCEDURES

Prospective applicants should request a copy of the full RFA from the Institute contact person listed below. All application in response to this RFA must be submitted on Application Form 398 Rev. 9/86. The RFA label contained in the application kit must be affixed to the bottom of the face

page. Failure to use this label could result in delayed processing of your application such that it may not reach the review committee in time for review. Insert on line 2 of the application face page the title of this RFA, "Pathogenesis and Natural History of Human Papilloma Viruses," and the RFA number 89-AI-02.

All inquiries and requests for the full text of this RFA should be directed to:

William P. Allen, Ph.D.  
Bacteriology and Virology Branch  
NIAID, NIH  
Westwood Building, Room 738  
Bethesda, Maryland 20892  
Telephone: (301) 496-7728

Interested investigators are asked to submit a letter of intent or call by January 27, 1989, the Institute contact person. The letter of intent should name the principal investigators and the titles of individual subprojects under consideration for the program project.

#### MODELS FOR TREATING HIGH BLOOD CHOLESTEROL

RFA AVAILABLE: 89-HL-05-H

P.T. 34; K.W. 0715040, 0415000, 0403004, 0730050, 0404000

National Heart, Lung, and Blood Institute

Application Receipt Date: March 24, 1989

The Lipid Metabolism-Atherogenesis Branch of the Division of Heart and Vascular Diseases and the Office of Prevention, Education and Control, 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 currently available from staff of the NHLBI.

This program will support demonstration and education research to develop and evaluate primary care models for the detection, evaluation and treatment of high blood cholesterol based on guidelines developed by the Adult Treatment Panel (ATP) of the National Cholesterol Education Program (NCEP). In addition, the program is to evaluate the feasibility of implementing these guidelines in usual primary care practice in terms of the impact on resources and health personnel, and costs to practice and patients. It is intended that this program be implemented by a multi-disciplinary team. Individuals that might be represented on this team are professionals with expertise in community and family practice, preventive medicine, lipidology or cardiology; primary care physicians in different individual or group practices; and others experienced in dietetics and nutritional counseling and behavioral science.

Requests for copies of the RFA should be addressed to:

Beth Schucker, M.A.  
Division of Heart and Vascular Diseases  
National Heart, Lung, and Blood Institute  
National Institutes of Health  
Federal Building, Room 401  
Bethesda, Maryland 20892  
Telephone: (301) 496-1681

#### DEVELOPMENT OF THE SIMIAN IMMUNODEFICIENCY VIRUS (SIV) MODEL FOR AIDS VACCINE STUDIES

RFA AVAILABLE: 89-AI-01

P.T. 34; K.W. 0715120, 1002045, 0740075, 0715008, 0710070

National Institute of Allergy and Infectious Diseases

RFA Availability Date: Immediately  
Letter of Intent Date: February 1, 1989  
Application Receipt Date: April 4, 1989

The National Institute of Allergy and Infectious Diseases (NIAID) announces the availability of an RFA for funding Development of the SIV Model for AIDS Vaccine Studies. This RFA (available on request) invites applications aimed

at systematic evaluations of virologic and immunologic aspects of SIV infection and their relevance in AIDS vaccine development. Scientific approaches including defining the extent and immunologic consequences of viral genetic variation during infection, determining immunologic correlates of immunity and surrogate markers for disease progression, and characterizing and standardizing assays for humoral and cellular immune responses to vaccines and infection are encouraged.

Awards will be made as Cooperative Agreements. Assistance by this mechanism differs from the usual research grant in that the Government component (in this instance, NIAID) awarding the Cooperative Agreement anticipates substantial involvement during performance. The nature of NIAID staff participation is described in the RFA. The applicant, however, must define his/her research interests and goals and is responsible for conducting the research supported by the grant.

Investigators from any institution, foreign or domestic, are eligible to apply for this funding.

This RFA is available from the following:

Dr. Alan M. Schultz  
NIAID, AIDS Program  
Vaccine Research and Development Branch  
6003 Executive Blvd., Room 236P  
Rockville, Maryland 20892  
Telephone: (301) 496-8200

#### CLINICAL STUDIES OF SAFETY AND EFFECTIVENESS OF ORPHAN PRODUCTS

RFA AVAILABLE: FDA-OP-89-1

P.T. 34; K.W. 0715149, 0755015, 0710100

Food and Drug Administration

Application Receipt Dates: January 3, 1989 and April 14, 1989

The Food and Drug Administration (FDA) is announcing the anticipated availability of funds for Fiscal Year 1989 for awarding to support clinical trials on safety and effectiveness of orphan products.

#### BACKGROUND

The Office of Orphan Products Development was established to identify and facilitate the availability of orphan products. Orphan products are drugs, biologics, medical devices (including in vitro diagnostics), and foods for medical purposes. These products may be useful in a rare disease/disorder but lack commercial sponsorship because they are not considered commercially attractive for marketing. A subcategory of orphan products are those marketed products in which there is evidence suggesting usefulness in a rare disease/disorder but which are not labeled for that disease/disorder because substantial evidence of safety and effectiveness for that use is lacking.

All funded studies are subject to the requirements of the Federal Food, Drug, and Cosmetic Act and regulations promulgated thereunder.

In general, FDA will only consider awarding grants to support clinical studies for determining whether the products are safe and effective for premarket approval. These clinical studies may be designed to assist in the approval of unapproved products or approval of unapproved new uses for products already marketed.

Applications should be for one discrete clinical trial. The applicant must provide supporting evidence that the product to be investigated is available to the applicant in the form needed for the clinical trial.

In addition to FDA's general interest in clinical studies for the safety and effectiveness of orphan products, the agency has recognized the following areas of pediatric research for which applications are encouraged.

1. Studies on marketed drugs currently approved only for adult uses which would provide data to support approving these drugs for pediatric patients.
2. Studies on nutritional products (medical foods) for management of inborn errors of metabolism for which adequate therapies are not currently available.

## MECHANISM OF SUPPORT

Support will be in the form of grant awards which will be subject to all policies and requirements that govern the research grant programs of the Public Health Service.

## REVIEW PROCEDURES

All applications submitted in response to this request for applications will be reviewed and evaluated for scientific and technical merit by experts in the subject field of the specific application and will also be subject to a second level of review by a National Advisory Council for concurrence of the recommendations made by the first-level reviewers.

In addition, applications will be reviewed before issuance of an FDA grant award to ensure to the extent practicable that proposed studies are consistent with requirements for investigations and marketing approval under the Food, Drug, and Cosmetic Act and the Public Health Service Act.

## METHOD OF APPLYING

Potential applicants should write or phone the individual listed below for the full RFA document, which includes instructions for the submission of applications:

Carol A. Wetmore  
Food and Drug Administration  
Office of Orphan Products Development, HF-35  
5600 Fishers Lane, Room 15-61  
Rockville, Maryland 20857  
Telephone: (301) 443-4903

Applications must be submitted to the Food and Drug Administration using Form 398. The outside of the mailing package and the top of the application face page should be labeled "Response to RFA-FDA-OP-89-1."

## IMPROVED METHODS FOR THE EARLY DIAGNOSIS OF HIV-INFECTION IN NEONATES, INFANTS, AND CHILDREN

RFA AVAILABLE: 89-HD-02

P.T. 34; K.W. 0715008, 0745020, 0403020, 0770005

National Institute of Child Health and Human Development

Application Receipt Date: March 8, 1989

The National Institute of Child Health and Human Development (NICHD) invites grant applications to support basic research on improvement in methods of diagnosis of human immunodeficiency virus (HIV) infection in children early in life. These methods may include, but are not limited to: (1) viral culture of peripheral blood mononuclear cells; (2) detection of antigen in serum or peripheral blood mononuclear cells; (3) direct detection of viral DNA or RNA with HIV-specific DNA probes; (4) detection of HIV-specific IgM and IgA antibodies; (5) detection of antibody forming cells in situ in the newborn; (6) detection of an IgG antibody synthesis in vitro using culture of peripheral blood mononuclear cells.

## 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 8-10 meritorious applications will be funded.

## 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:



Anne Willoughby, M.D., M.P.H.  
Pediatric, Adolescent, and Maternal AIDS Branch  
Center for Research for Mothers and Children  
National Institute of Child Health and Human Development  
EPN, Room 630-P  
6130 Executive Boulevard  
Bethesda, Maryland 20892  
Telephone: (301) 496-7339

### ONGOING PROGRAM ANNOUNCEMENTS

#### RESEARCH IN PAGET'S DISEASE OF BONE

P.T. 34; K.W. 0705050, 0755030, 1002019, 0710030, 0785035

National Institute of Arthritis and Musculoskeletal and Skin Diseases

#### BACKGROUND

Paget's disease of bone, also known as osteitis deformans, is a chronic disease of the skeleton characterized by abnormally rapid bone turnover. Excessive bone breakdown and formation can result in bone that is dense but fragile. Paget's disease most frequently occurs in the bone of the spine, skull, pelvis, thighs, and lower legs. In more severe cases there may be secondary involvement of tissues other than bone.

As many as 3 million Americans over the age of 40 years have some form of Paget's disease of bone. Approximately 250,000 cases are severe enough to require medical intervention. The condition often develops progressively, and is most commonly diagnosed between the ages of 50 and 70.

Several laboratory tools are now available to confirm more clearly the diagnosis of Paget's disease. These include biochemical assays of blood for metabolic factors related to bone turnover, x-rays, bone scans, and bone biopsy. Some of the possible treatments available to alter bone metabolism for specific patients include human and salmon calcitonin, disodium etidronate and mithramycin. Other symptomatic relief may be available to patients. A few new therapies are under investigation at this time.

While the prognosis for Paget's disease has improved over the past 10 years, the etiology remains a mystery. In addition, none of the current treatment regimens is ideal for all patients.

#### GOALS AND SCOPE

This solicitation is intended to stimulate research that provides further understanding of Paget's disease of bone. Both basic and clinical research are encouraged. In some instances, collaborative and multi-disciplinary investigative efforts may be required to achieve significant scientific advances.

The NIH urges applicants for grants to give added attention where feasible and appropriate to the inclusion of minority groups and/or women in the study populations for research.

The NIAMS invites grant applications including, but not limited to, the following general areas:

#### Etiology

Virus-like nuclear and cytoplasmic inclusions have been found in the osteoclasts of Paget's disease patients. It is important to determine if these viruses have a role in the pathogenesis of Paget's or are an epiphenomenon unrelated to the course of the disease. (If a causative agent is found, does it provide a continuous stimulus or a single system perturbation?)

Because of numerous agents involved in the complex regulation of bone turnover in normal and Paget's bone, it would be valuable to isolate specific local and systemic factors that may be altered in the disease state. Investigations should seek to explain the increased regional angiogenesis present in Pagetic bone.



## Genetics

Paget's disease follows familial and racial patterns that may be genetically based. HLA-linkage studies should be continued in families with a high prevalence of Paget's. Molecular biology techniques may uncover defects that make these kindreds unusually susceptible to developing this disease.

## Bone Cell Biology

In a general sense it is valuable to evaluate further the phenotypic expression of Paget's cells. The basic structure and cell functioning of Pagetic bone needs more scientific study. The increased turnover rate of Paget's bone cells also makes them a potentially good model system for studies on basic bone cell biology.

Paget's disease results in a large increase in multinucleate osteoclasts which also develop increased numbers of calcitonin receptors. Therefore, important areas of future investigation include studying the generation of multinucleate osteoclasts from precursors and the special process of cell fusion. The calcitonin receptor should be cloned to allow further mechanistic evaluation of this multinucleate process.

It is not certain that the primary lesion in Paget's disease is in the osteoclast. The turnover imbalance may be driven by a defect in the osteoblast. The functional role of osteoblasts in Paget's disease requires further investigation.

## Clinical Studies

Because many clinical studies of new drug therapies are currently being supported by pharmaceutical companies, clinical trials that duplicate these efforts are discouraged. However, new and unique approaches for treating the primary metabolic bone disorders or other secondary symptoms are appropriate in small-scale clinical evaluations.

## APPLICATION AND REVIEW PROCEDURES

Applications in response to this announcement will be reviewed in accordance with the usual Public Health Service peer review procedures for research grants (Study Section). Review criteria include: significance and originality of the research goals and approaches; feasibility of the research and adequacy of the experimental design; training, research competence, and dedication of the investigator(s); adequacy of available facilities; and provision for the humane care of animals. Decisions will be based on Initial Review Group and appropriate National Advisory Council recommendations. Applications should be submitted on form PHS-398, available in the business or grants office at most academic or research institutions, or from the Division of Research Grants, National Institutes of Health. Applications will be accepted in accordance with the dates of new applications on a continuing basis: February 1, June 1, October 1.

The phrase "RESEARCH IN PAGET'S DISEASE OF BONE" should be typed on line 2 of the face page of the application. The original and six copies should be sent or delivered to:

Grant Application Receipt Office  
Division of Research Grants  
Westwood Building, Room 240  
National Institutes of Health  
Bethesda, Maryland 20892-4500

For further information, investigators are encouraged to contact the following individual:

Stephen L. Gordon, Ph.D.  
Musculoskeletal Diseases Program Director  
National Institute of Arthritis and  
Musculoskeletal and Skin Diseases  
Westwood Building, Room 407  
Bethesda, Maryland 20892  
Telephone: (301) 496-7326

This program is described in the Catalog of Federal Domestic Assistance No. 13.846, Arthritis, Musculoskeletal and Skin Diseases Research. Awards will be made under the authority of the Public Health Service Act, Title III, Section 301 (Public Law 78-410, as amended; 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 the intergovernmental review requirements of Executive Order 12372 or Health Systems Agency review.

POSTDOCTORAL FELLOWSHIPS FOR TRAINING IN REPRODUCTIVE AND DEVELOPMENTAL TOXICOLOGY

P.T. 22; K.W. 0720005, 1007009, 1002042

National Institute of Environmental Health Sciences

Application Receipt Dates: January 10, May 10, September 10

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. Reproductive and developmental toxicity are particular areas of concern, for the health of human reproduction must be respected and vigorously guarded for our future generations. NIEHS recognizes that all too frequently there is a paucity of information regarding the effects of environmental factors on human reproductive capacities. Especially vulnerable are those periods of gametogenesis when eggs and sperm are maturing which represent phases where subtle, deleterious mutagenic changes can be induced by foreign substances. Such mutations could be passed on to subsequent generations before the eventual expression of such deleterious mutations might be seen. Moreover, environmental agents may be important factors in the high note of preimplantation and early postimplantation losses. Thus, with the continuing production and release of chemicals and other synthetic materials into our environment, major research efforts are needed to understand the potential toxicity of such substances, especially on the reproductive system and the developing embryo.

II. GOALS AND SCOPE

To conduct studies in reproductive and developmental toxicology, scientists require a basic knowledge of reproductive and developmental physiology as well as an understanding of the basic principles of biochemical and pharmacological toxicology. In order to foster the marriage of these two rather diverse disciplines, the NIEHS wishes to attract applicants from either discipline, reproductive physiology or toxicology, for postdoctoral fellowships in the other discipline. Through this mechanism, NIEHS hopes to create a core of individuals with expertise in reproductive toxicology. These reproductive toxicologists shall then be able to bring an interdisciplinary approach to the problems associated with the toxic effects of environmental agents on human reproduction.

III. MECHANISM OF SUPPORT

The NIEHS will support fellowships in these areas through individual National Research Science Awards. These awards are for support of traditional postdoctoral training (F32) or for senior fellowships (F33) which support sabbatical leaves for additional training. Details of the award provisions are available in the NIH Guide for Grants and Contracts, Vol. 13, No. 1 (January 6, 1984). Special consideration will be given to these applicants who wish to further their training in the aforementioned disciplines.

IV. APPLICATION AND REVIEW PROCEDURES

A. Deadline

Applicants will be accepted in accordance with the usual receipt dates for new fellowship applications; i.e., January 10, May 10, September 10. 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. 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 an appropriate National Advisory Council.

Applications should be submitted on form PHS-416-1 which is available in the business or grants and contract offices at most academic and research institutions or from the DRG.

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

Applicants 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:

Annette G. Kirshner, Ph.D.  
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) 541-0488

OR

Jerry A. Robinson, Ph.D.  
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

#### IMPACT OF ENVIRONMENTAL AGENTS ON REPRODUCTIVE PROCESSES

P.T. 34; K.W. 0725005, 1002042, 0760003, 0760025

National Institute of Environmental Health Sciences

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

#### I. BACKGROUND

The synthesis and manufacture of new commercial chemicals as well as contributions from technological advancements resulting in new chemical products presents the human population with potential exposures to agents which may lead to serious human health problems. Of particular concern is the reproductive system which can be extremely vulnerable to toxic substances. Those periods when gametogenesis (egg and sperm production) are most active represent very susceptible periods. Subtle, deleterious mutagenic changes may be induced by exposure to foreign substances but the expression of these changes may not occur until generations later. Furthermore, exposure to certain environmental agents may contribute to human problems of subfertility or even infertility. The National Institute of Environmental Health Sciences recognizes that too little information is available regarding the effects of many environmental agents on the reproductive capacity of humans. Therefore, it is the intent of this program initiative to focus on those problems related to the source of reproductive toxicity which result from exposure to various environmental agents.

#### II. RESEARCH GOALS AND SCOPE

This announcement is issued to encourage investigator-initiated research toward and to foster research activity in reproductive and developmental toxicology (i.e., the interaction of environmental substances with and their effects on the reproductive system and the developing embryo). Collaborative research efforts between reproductive physiologists and toxicologists, as well as scientists from closely related disciplines, are especially encouraged.

Research interests include, but are not limited to, studies of the direct and indirect effect of environmental agents on the gonads, secondary sex glands, neuroendocrine control mechanisms and/or neurobehavioral aspects involved in the reproductive process. Research efforts may be directed at: 1) the inhibition of hormone secretion by environmental agents; 2) chemical interference of hormone activity at target cell sites; 3) hormone-like action

of environmental substances; 4) the effect or role of reproductive hormones on the metabolism and toxicity of chemicals; and 5) the development and standardization of more sensitive tests through the utilization of biological markers 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. 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 an appropriate National Advisory 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 "Impact of Environmental Agents on Reproductive Processes."

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  
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