

# NIH GUIDE

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The NIH Guide announces scientific  
initiatives and provides policy and  
administrative information to indivi-  
duals and organizations who need to  
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requirements, and changes in extra-  
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## NOTICES

### RETENTION OF INTEREST EARNED ON ADVANCES OF GRANT FUNDS

P.T. 34; K.W. 1014006

Public Health Service

This is a reminder that the amount of interest earned on advances of grant funds which may be retained by nongovernmental grantees for administrative expenses of \$100. The Notice of Proposed Rulemaking (NPRM) published in the FEDERAL REGISTER on November 4, 1988 to amend OMB Circular A-110 proposed to raise the amount to \$250. However, the NPRM has NOT been finalized. Therefore, the \$100 limit specified in Section 74.92 of 45 CFR Part 74 is still in effect.

### NOTICES OF AVAILABILITY (RFPs AND RFAs)

#### OFFICE OF CANCER COMMUNICATIONS COMMUNITY SUPPORT CONTRACT

MASTER AGREEMENT RFP AVAILABLE: NCI-CO-03891-63

P.T. 16; K.W. 0403004

National Cancer Institute

The National Cancer Institute, Prevention and Control Contracts Section, is soliciting proposals for a Master Agreement on projects to support the planning, development and implementation of public information projects which require application at the regional or local level. The Request for Proposals (RFP) will be issued approximately 15 days after publication of this announcement and the closing date will be approximately 45 days after issuance.

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

Ms. Tina Huyck  
Research Contracts Branch  
9000 Rockville Pike  
Executive Plaza South, Suite 635  
National Cancer Institute  
Bethesda, MD 20892  
Telephone: (301) 496-8628

#### DIABETES CENTERS

RFA AVAILABLE: DK-90-11

P.T. 04; K.W. 0715075, 0715135, 0785050, 0710030

National Institute of Diabetes and Digestive and Kidney Diseases

Application Receipt Date: November 12, 1990

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) invites applications for funding of up to two Diabetes and Endocrinology Research Center (DERC) grants to be competitively awarded in Fiscal Year 1992.

#### BACKGROUND

DERCs are part of an integrated program of diabetes-related research support provided by NIDDK. These centers have provided a focus for increasing collaboration and cost effectiveness among groups of successful investigators at institutions with established comprehensive diabetes research bases.

#### OBJECTIVES AND SCOPE

The objectives of the DERCs are to bring together clinical and basic science investigators from relevant disciplines in a manner which will enhance and extend the effectiveness of research related to diabetes and its complications. A diabetes center must be an identifiable unit within a single university medical center or a consortium of cooperating institutions, including an affiliated university. An existing program of excellence in biomedical research in the area of diabetes and related metabolic and

endocrine disorders is required. This research should be in the form of NIH-funded research projects, program projects or other peer-reviewed research that is in existence at the time of submission of a center application. Close cooperation, communication, and collaboration among all involved personnel of all professional disciplines are ultimate objectives. Applicants should consult with NIDDK staff concerning plans for the development of the center.

The DERCs are based on the core concept. Cores are defined as shared resources that enhance productivity or in other ways benefit a group of investigators working in diabetes or diabetes-related areas to accomplish the stated goals of the center. Two other types of activities may also be supported with center funding--a pilot and feasibility program and an enrichment program. The pilot and feasibility program provides modest support for new initiatives or feasibility research studies. This program is directed at new investigators or established investigators in other research disciplines where their expertise may be applied to diabetes research. The center grant may also include limited funds for program enrichment such as seminars, visiting scientists, consultants, workshops, etc.

#### MECHANISM OF SUPPORT

NIDDK expects to award up to two DERC grants in Fiscal Year 1992 on a competitive basis. The receipt of two competing continuation applications is anticipated, which will compete with other applications received in response to this announcement. Foreign institutions are not eligible to apply. The anticipated awards will be for five years and will be contingent upon the availability of appropriated funds. Requests for support must be limited to no more than \$750,000 in direct costs per year. The Request for Applications (RFA) (general description and Guidelines for the DERC) and consultation may be obtained from:

Dr. Sanford A. Garfield  
Diabetes Centers Program Director  
Division of Diabetes, Endocrinology, and Metabolic Diseases  
Westwood Building, Room 626  
National Institute of Diabetes and Digestive and Kidney Diseases  
Bethesda, MD 20892  
Telephone: (301) 496-7418

#### REVIEW PROCEDURES

Applications for a DERC grant will be evaluated in national competition by the NIH grant peer review process. Applications will be reviewed initially by a special review committee convened by the NIDDK and subsequently by the National Diabetes and Digestive and Kidney Diseases Advisory Council.

#### METHOD OF APPLYING

Potential applicants are urged to submit a letter of intent regarding their application. The letter of intent is nonbinding and is not a precondition for an award. The letter of intent should include the name(s) of the principal investigator and principal collaborators, descriptive titles of the core facilities and pilot/feasibility projects, and the organization(s) involved. Letters of intent should be sent to:

Chief, Review Branch  
National Institute of Diabetes and Digestive and Kidney Diseases  
National Institutes of Health  
Westwood Building, Room 406  
Bethesda, MD 20892

Applications must be submitted using PHS Form 398 (Rev. 10/88). The RFA label contained in the application kit must be affixed to the bottom of the face page of the original copy of the application. Failure to use this label could result in delayed processing and review of your application. Complete line 2 of the application face page by inserting "Diabetes Centers, RFA DK-90-11."

Mail the completed application (original and four copies) to:

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

Simultaneously submit two copies to:

Chief, Review Branch  
National Institute of Diabetes and Digestive and Kidney Diseases  
Westwood Building, Room 406  
Bethesda, MD 20892

The special single receipt date for submissions in response to this announcement is November 12, 1990, with earliest funding December 1, 1991.

COOPERATIVE CLINICAL TRIALS IN TRANSPLANTATION

RFA AVAILABLE: AI-90-07

P.T. 34; K.W. 0745065, 0755015, 0745045, 0745040

National Institute of Allergy and Infectious Diseases

Letter of Intent Receipt Date: August 17, 1990  
Application Receipt Date: October 12, 1990

The National Institute of Allergy and Infectious Diseases (NIAID) through the Genetics and Transplantation Branch (GTB) of the Division of Allergy, Immunology, and Transplantation (DAIT) invites applications from investigators desiring to participate under Cooperative Agreements in a multi-center cooperative clinical trial. The goal of this study is to evaluate new and currently used immunotherapeutic protocols in the treatment and prevention of acute kidney graft rejection.

In order to meet the stated objectives effectively, a network of centers will be established to conduct clinical trials using common protocols thus facilitating the study of large numbers of patients in a shorter time-frame than possible were individual centers to act alone.

The information acquired through this cooperative clinical trial will benefit the public by improving the prognosis of patients on dialysis waiting for a kidney transplant, by expediting the process of evaluating new immunosuppressive therapeutic regimens and by speeding the transfer of basic knowledge to clinical application.

The NIH places special emphasis on the need for inclusion of minorities and women in studies of diseases which disproportionately affect them and also urges that applicants give added attention, where feasible and appropriate, to their inclusion in other clinical studies. For proposed population-based studies which include neither women nor minorities, a clear rationale for not including them must be provided. In attempting to include either group in a particular study, attention must be paid to such issues as research design and sample size.

Successful applicant(s) funded under this Request for Applications (RFA) will be supported through Cooperative Agreements. Cooperative Agreements are awarded to both not-for-profit and for-profit organizations and institutions. This type of solicitation is utilized when it is desired to encourage investigator-initiated research projects in areas of special importance to the NIH and where substantial programmatic involvement by staff is anticipated. This RFA solicitation represents a single competition with a specified deadline for receipt of applications. There are no present plans to reissue this RFA at any future time. The NIAID may invite competitive continuation applications upon expiration of the initial funding period contingent on the continued availability of funds for this purpose and the continued need to conduct clinical trials in this area. All applications received in response to the RFA will be reviewed by an Initial Review Group convened by the Division of Extramural Activities, NIAID, and by the National Advisory Allergy and Infectious Diseases Council.

The deadline for the receipt of applications in response to this RFA is October 12, 1990. Applications should be prepared and submitted in accordance with the aims and requirements set forth in the remainder of this document.

NIAID has set aside \$2 million total costs for funding the initial year.

For a copy of this RFA, please contact:

Stephen M. Rose, Ph.D.  
Chief, Genetics and Transplantation Branch  
Division of Allergy, Immunology and Transplantation  
National Institute of Allergy and Infectious Diseases  
Westwood Building, Room 754  
5333 Westbard Ave.  
Bethesda, MD 20892  
Telephone : (301) 496-5598  
FAX Number: (301) 402-0175

#### ONGOING PROGRAM ANNOUNCEMENTS

#### BEHAVIORAL CONSEQUENCES OF LONG-TERM USE OF ABUSED DRUGS

PA: PA-90-10

P.T. 34; K.W. 0404009, 0404000, 0710085

National Institute on Drug Abuse

#### PURPOSE

The purpose of this program announcement is to encourage the submission of research proposals describing the investigation of any persistent, residual behavioral effects of abused drugs in human or animal subjects following long-term use. The studies should be directed at evaluating possible changes in behavior following withdrawal. In all cases, the subjects must be drug abstinent prior to the time of evaluation.

This announcement is intended to stimulate the study for the possible presence of residual effects of any major drug of abuse such as cocaine, phencyclidine, methamphetamine or marijuana, used alone or in combination with each other or with alcohol. Applicants interested in the specific effects of alcohol on behavior are referred to the National Institute on Alcohol Abuse and Alcoholism announcement "Alcohol Research Grants" revised January 1990.

#### RESEARCH OBJECTIVES

After many months or years of drug taking, some individuals eventually seek treatment and subsequently no longer abuse drugs. Basic and clinical studies are needed to describe behavioral deficits which may persist after prolonged drug abuse.

More research is needed to address questions such as: 1) Which drugs and drug combinations have lasting behavioral-neurotoxic effects? 2) Is there a particular age where use of drugs may possibly be more deleterious to subsequent impairment in performance or psychosocial status? 3) If subtle behavioral deficits or electrophysiological changes exist in abstinent drug abusers, do they have clinical significance? 4) To what extent can individual differences in cognitive performance be described and explained in populations of abstinent drug abusers? 5) Is there a relationship between number of previous drug withdrawal episodes and subsequent memory/cognitive performance?

Research studies are solicited that evaluate and/or systematically track the degree of performance and learning impairment and possible brain dysfunction present after long-term drug abuse. Since some neurophysiological performance deficits in either adults or children may have been present prior to the use of drugs, innovative ways are needed to access this information, e.g., through past tests or school reports. Skills that could be studied include, but are not limited to, motor dexterity, sensory processing, attention, reaction time, language functioning, verbal reasoning, visuospatial analysis, memory, degree of abstraction, planning and problem solving as well as adaptative behavior. A special need exists for the development of computer systems to assist in the evaluation for possible residual drug effects on performance.

Physiological measurements, such as electroencephalogram, evoked potentials, autonomic or motoric measures, may be included if they can be directly related to the performance measure being studied and thus provide additional information regarding residual drug effects. Other measures such as brain scanning or neuroendocrine procedures may be included but only when the major emphasis is on relating these variables to impairments in behavior.

Clinical diagnostic assessments for psychopathology or scholastic abilities may be included to more completely evaluate performance deficits in long-term drug abusers.

Populations studied can include any age, sex or culture, but there is a special need to clinically evaluate children, adolescents and the elderly as well as groups with physical or mental handicapping conditions and minorities.

Proposals for animal models (adult or developmental) describing any residual effect of abused drugs on behavior may be submitted. Drugs may be administered by the experimenter or self-administered by the animal. Behavioral measures, such as operant conditioning, other learning or memory tasks, social dominance, aggression, sexual activity, or motoric behavior, may be used. Correlative biological measures, such as neurophysiological, or neurochemical, may be used if they can be directly related to behavioral performance.

#### MECHANISM OF SUPPORT

Support mechanisms include: (1) Research Projects (R01), (2) Small Grants (R03), (3) First Independent Research Support and Transition Awards (R29).

#### INCLUSION OF MINORITIES AND WOMEN IN STUDY POPULATIONS

Applicants are urged 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.

Applicants are urged to consider the inclusion of women in the study populations for all clinical research efforts. Exceptions would be studies of diseases which 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 provided for their exclusion.

In order to provide more precise information to the treatment community, it is recommended that publications resulting from research supported by the Alcohol, Drug Abuse, and Mental Health Administration 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," "female volunteers."

#### ELIGIBILITY

Applications may be submitted by public or private nonprofit or for-profit organizations such as universities, colleges, hospitals, laboratories, units of State or local governments, and eligible agencies of the Federal governments. Women and minority investigators are encouraged to apply. Applications are especially encouraged from State governments with research units and/or State governments collaborating with university-based research units.

#### APPLICATION PROCEDURES

Application kits (PHS 398, rev. 10/88) containing the necessary forms and instructions may be obtained from business offices or 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 application material: Grants Management Branch, National Institute on Drug Abuse, Room 8A-54, 5600 Fishers Lane, Rockville, MD 20852, Telephone: (301) 443-6720.

The signed original and six (6) copies of the completed application should be sent to:

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

#### RECEIPT AND REVIEW SCHEDULE:

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 Public Health Service referral guidelines. The review group, 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 an appropriate 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.

Applications submitted in response to this announcement are not subject to the intergovernmental review requirements of Executive Order 12372, as implemented through Department of Health and Human Service regulations at 45 CFR Part 100. Applications received after the deadline for receipt of applications in a given review cycle will be reviewed in the next appropriate review cycle scheduled, as indicated below.

Receipt of Applications	Initial Review	Advisory Council Review	Earliest Start Date
Feb/Mar 1*	June/July	Sept/Oct	December 1
June 1/July 1*	Oct/Nov	Jan/Feb	April 1
Oct 1/Nov 1*	February/March	May/June	July 1

\* Competing continuation, supplemental and revised applications are to be submitted on these dates.

#### REVIEW CRITERIA

Criteria for scientific/technical merit review of applications will include the following: significance and originality from a scientific or technical standpoint of the goals of the proposed research; adequacy of the methodology proposed to carry out the research; feasibility of the proposed research; qualifications and research experience of the principal investigator and other key personnel; availability of adequate facilities, other resources, and collaborative arrangements necessary for the research; appropriateness of budget estimates for the proposed research activities; and adequacy of provisions for the protection of human or animal subjects, as applicable.

#### AWARD CRITERIA

Applications recommended for approval by the appropriate National Advisory Council will be considered for funding on the basis of overall scientific, clinical and technical merit of the proposal as determined by peer review, appropriateness of budget estimates, program needs and balance, policy consideration, adequacy of provisions for the protection of human or animal subjects, and availability of funds.

#### INQUIRIES

Further information and consultation on requirements relevant to this program announcement can be obtained from:

Dr. John Spencer  
National Institute on Drug Abuse  
5600 Fishers Lane, Room 10A-46  
Rockville, MD 20857

#### DOMESTIC ANIMAL MODELS OF RETROVIRAL ASSOCIATED MALIGNANCIES

PA: PA-90-11

P.T. 34; K.W. 0755020, 1002045, 0715035, 0765033

National Cancer Institute

#### BACKGROUND

The National Cancer Institute (NCI) has played the major role in supporting research on oncogenic viruses of domestic animals as models for human malignancies. The purpose of this Program Announcement is to inform the scientific community of the NCI's continuing interest in supporting basic research on retroviral pathogenesis and neoplastic sequelae in domestic animal models of human cancer. Studies of domestic animal retroviruses have the potential to provide valuable basic information on the mechanism(s) of cancer induction by viruses and to serve as models for the initial evaluation of intervention strategies prior to human clinical trials.

Mammalian retroviruses have been isolated from humans, monkeys, mice, cats, cows, goats, sheep, pigs and horses. In some virally infected animals, neoplastic and Kaposi's sarcoma-like lesions have been observed, supporting



the hypothesis that retroviruses may be directly or indirectly involved in the development of malignancies and disease progression. Retrovirus animal models may therefore aid in investigations of the initiation and progression of neoplasia of viral origin and provide a better understanding of the role of viruses in the etiology of human cancer.

Progress in most of these domestic animal systems has been limited by an indolent disease course and the fact that the neoplasms occur in a limited percentage of animals. Other limitations include: the lack of reagents for typing of cells of the immune system; probes for some viruses are either not available or are not well characterized; monoclonal antibodies for some viral antigens are not available. Additionally, the number of scientists actively conducting research on each virus is small. One goal of this Program Announcement is to encourage collaborations between scientists with complementary areas of research expertise, such as molecular biology of retroviruses and pathogenesis or immunology, with the intent of accelerating progress in these important cancer models. The overall purpose of the proposed Program Announcement is to help stimulate research activity in these virus cancer models and overcome these limitations.

It is anticipated that research on viruses of domestic animals will continue to provide information which will aid in studies of retrovirus-associated human malignancies and provide insights into the etiology, prevention and treatment of human malignancies.

#### RESEARCH GOALS AND SCOPE

This Program Announcement reaffirms the NCI's continuing interest in the support of basic research on retroviral pathogenesis in domestic animals as models for human malignancies. Such studies will aid in understanding the properties of viruses and features of the host response that determine disease progression from initial virus infection to neoplastic sequelae. Retroviruses appropriate for this Program Announcement include those of large domesticated livestock, such as cows, horses, sheep, goats and pigs; specifically excluded are retroviruses of cats, dogs, mice, primates and the avian species. Collaborative efforts between scientists with complementary areas of research expertise will be encouraged. Specific research topics of interest to the NCI include, but are not limited to: 1) studies emphasizing the development and utilization of known retroviral domestic animal models for investigations of disease pathogenesis from the initial infection to the development of pre-neoplastic lesions and neoplastic sequelae; 2) studies emphasizing the use of domestic animals for investigations of virus-host interactions to define and understand viral pathogenic and immune function alterations leading to pre-neoplastic lesions and neoplastic sequelae, including the role of other RNA and DNA virus cofactors; 3) studies which emphasize the expression and regulation of viral or cellular genes in pre-neoplastic lesions and malignant tissues from retrovirus-infected domestic animals; 4) studies to isolate and characterize new retroviruses from normal, pre-neoplastic lesions and neoplastic tissues of domestic animals and study the mechanisms of oncogenesis of these viruses. Where appropriate, collaborative arrangements to facilitate the achievement of research goals should be considered.

#### MECHANISM OF SUPPORT

This program will be supported through traditional research grants (R01). Awards will be administered under Public Health Service grants policy as stated in the PHS Grants Policy Statement, DHHS Publication Number (OASH) 82-50,000, revised January 1, 1987. The total project period for applications submitted in response to the Program Announcement should not exceed five years.

Applications will compete for available funds with all other approved applications assigned to the Institute. The following will be considered making funding decisions: (a) quality of the proposed project as determined by peer review; (b) availability of funds; (c) balance among research areas of the program announcement.

#### ELIGIBILITY

Non-profit and for-profit organizations and institutions, governments and their agencies, and individuals are eligible to apply. Foreign and domestic institutions are eligible.

#### APPLICATION, SUBMISSION AND REVIEW PROCEDURES

Applications should be submitted on Form PHS-398, revised 10/88, available in the business or grants office at most academic or research institutions, or from the Division of Research Grants, NIH. Applications will be accepted in

accordance with the date for receipt of applications on or before October 1, February 1, or June 1.

Applications will be assigned on the basis of established Public Health Service referral guidelines. Applications will be reviewed for scientific and technical merit by regular study sections of the NIH. Following study section review, the applications will receive a second-level review by the appropriate national advisory council.

The phrase "IN RESPONSE TO PA-90-11 - DOMESTIC ANIMAL MODELS OF RETROVIRAL ASSOCIATED MALIGNANCIES" should be typed on line 2 of the face page of the application and check "YES" in the box. Applications should be responsive to the Program Announcement and the Abstract of the Research Plan should contain a clear statement relating the proposed research to domestic animal viral oncogenesis.

The original and six copies should be sent to:

Grant Applications Receipt Office  
Division of Research Grants  
National Institutes of Health  
Westwood Building, Room 240  
Bethesda, MD 20892\*\*

Written or telephone inquiries concerning the objectives and scope of this Program Announcement or inquiries about whether or not specific proposed research would be responsive are encouraged and should be directed to Dr. Kenneth J. Cremer at the address below. The program director welcomes the opportunity to clarify any issues or questions from potential applicants.

Dr. Kenneth J. Cremer  
Program Director  
AIDS Virus Studies  
Biological Carcinogenesis Branch  
Division of Cancer Etiology  
National Cancer Institute  
Executive Plaza North, Room 540  
Bethesda, MD 20892  
Telephone: (301) 496-6085

This program is described in the Catalog of Federal Domestic Assistance No. 13.393, Cancer Cause and Prevention Research. Awards are under authorization of the Public Health Service Act, Title III, Section 301(c), Public Law 78-410, as amended; 42 U.S.C. 241; the Small Business Innovation Development Act, Public Law 97-219, and Section 410 as amended by Public Law 99-158, 42 U.S.C. 285; and administered under PHS grant policies and Federal Regulations 42 CFR 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.

#### OBESITY, ENDOCRINE AND FAT METABOLISM AND CANCER RISK

PA: PA-90-12

P.T. 34; K.W. 0715145, 0715035, 0765025, 0411005, 0785050

National Cancer Institute

#### I. INTRODUCTION

The Division of Cancer Etiology of the National Cancer Institute invites regular research project (R01) grant applications from interested investigators for epidemiologic studies to define the relationship between obesity and cancer etiology.

#### II. BACKGROUND

Obesity influences the risk of many diseases including certain types of cancer. In particular, risk of endometrial cancer at all ages is increased by obesity. Other sites for which obesity has been reported to increase cancer risk are breast (at postmenopausal ages), gallbladder, kidney, prostate, ovary and colon, although findings are not consistent among studies. An inverse association has been reported between body mass and the risk of premenopausal breast cancer.

Risk of several diseases varies not only with degree of obesity but also with the body distribution of fat. This is true for hypertension, diabetes,

gallbladder disease and mortality due to all causes and also has been reported for breast cancer. An association between fat patterning and changes in endocrine metabolism also has been reported in response to changing environmental exposures.

Distribution of body fat varies with age, degree of obesity, race and ethnicity, and is affected by the genetic background of the individual. In recent years, improved methods of measuring body fat distribution have become available, and these methods have been used in evaluating the various indices for estimating body fat mass or differences in its patterning. For example, recent data from Sweden support the use of  $\text{weight}/(\text{height} \exp(0.58))$  as an estimator of total adipose tissue in preference to  $\text{weight}/(\text{height} \exp(2))$  or  $\text{weight}/(\text{height} \exp(1.5))$ ; these latter ratios have been used extensively in epidemiologic studies of the effects of obesity. Procedurally, waist and hip measures entered into multivariate analyses are superior to the use of the waist/hip ratio as an analytic variable. Although caloric intake and expenditure are intimately related to obesity and to adipose tissue deposition or mobilization, these factors have not been taken into consideration together with adequate measures of fat distribution in studying the relationship of cancer risk to obesity.

### III RESEARCH GOALS AND SCOPE

The purpose of this announcement is to encourage further studies to clarify associations recently found between body fat distribution and cancer risk, or risk factors, as well as to extend knowledge through the investigation of related or new hypotheses. A major goal is the definition of differences in adipose tissue metabolism and hormone metabolism from varied environmental exposures as they relate to site-specific cancer risks.

Research topics of interest include but are not limited to:

- o Development and validation of improved measurement techniques for cancer risk factors related to adiposity, caloric balance, steroid hormone and fat metabolism, and diet; assessment of interaction and its effect on specific cancer risks.
- o The use of better measures of total adiposity and of the distribution of adipose tissue in evaluating risk of various cancer sites, such as breast, endometrium, prostate, colon, gallbladder, ovary, lung and kidney. This includes interest in definition of cancer risk associated with the deposition or metabolic activity of adipose tissue in the visceral compartment, and clarification of any effect of height.
- o The impact on site-specific cancer risk of age-, ethnic-, or race-related variation in adiposity or in adipose tissue distribution, taking into consideration relevant confounding factors.
- o Evaluation of the relationship between site-specific cancer risk and risk of other diseases related to adipose tissue distribution, such as diabetes, hypertension, gallbladder disease and polycystic ovaries. This includes consideration of risk factors that may relate to cancer and to other diseases, such as serum lipids and variations in lipid metabolism.
- o Evaluation of the etiologic validity of cancer risk estimates derived from case/control studies of adiposity or adipose tissue distribution.
- o Improved definition of the relationship between steroid hormone metabolism and adiposity, including adipose tissue patterning, as this information contributes to knowledge of cancer risk. This includes improved understanding of the role and causes of variation in hormone binding, both to hormone binding globulins and to cellular receptors in humans.
- o Insight into whether environmental factors, which influence both cancer risk and steroid hormone metabolism, act directly as well as indirectly in affecting cancer risk. Environmental factors of interest include smoking, dietary variation, energy balance, and intake of specific substances such as indoles, ethyl alcohol, saturated and unsaturated fatty acids.
- o Studies of the impact of fluctuations in body fat over time on the mobilization of substances stored in body fat (such as pesticides) and the relationship of such changes to cancer etiology.

- o Determination of the relationship to cancer risk of site-specific variation in adipose tissue activity.
- o Investigation into reasons for the cross-over in obesity-associated risk of breast cancer in pre- and post-menopausal women.
- o Determination of whether adiposity/fat patterning, examined across age without regard to menopausal status, distinguishes populations with differing constellations of risk factors, as is true of the pre- and post-menopausal risk factor patterns.
- o Evaluation of important health/physiologic effects associated with modification of major cancer risk factors, such as altering the quantity or quality of circulating estrogenic or androgenic hormones, weight reduction, and/or dietary intervention.

Where feasible and appropriate, applications for the proposed epidemiologic studies should include a suitable representation of minorities and women. If the applicant cannot comply, a clear rationale for their exclusion must be provided.

#### IV. MECHANISM OF SUPPORT

This program will be supported through traditional research (R01) grants. Awards will be administered under Public Health Service grants policy as stated in the PHS Grants Policy Statement, DHHS Publication No. (OASH) 82-50,000, revised January 1, 1987. The total project period for applications submitted in response to this Program Announcement should not exceed five years. This topic is expected to be of long-term interest and will remain in effect until retracted. Grantees interested in submitting renewal applications should inquire if it remains in effect; if not, an unsolicited application may be submitted in the usual way.

#### V. ELIGIBILITY

Non-profit and for-profit organizations and institutions, governments and their agencies, and individuals are eligible to apply. Foreign and domestic institutions are eligible.

#### VI. APPLICATION AND REVIEW PROCEDURES

Applications must be submitted on FORM PHS-398, revised 10/88, available in the business or grants office at most academic or research institutions, or from the Division of Research Grants, National Institutes of Health, Room 449, Westwood Building, 5333 Westbard Avenue, Bethesda, Maryland 20892. The format and instructions applicable to regular research grant applications should be followed. Deadline dates for submission of applications for R01 applications are on or before February 1, June 1, or October 1, annually.

The phrase "IN RESPONSE TO PROGRAM ANNOUNCEMENT -- PA-90-12 OBESITY AND CANCER RISK" must be typed on line 2 of the face page of the application, and YES must be checked. The completed, signed original and six (6) signed, exact copies should be submitted in one package to the Division of Research Grants at the address below. The photocopies must be clear and single-sided.

Division of Research Grants  
National Institutes of Health  
Westwood Building, Room 240  
5333 Westbard Avenue  
Bethesda, MD 20892\*\*

The Division of Research Grants will not accept any application in response to this announcement that is the same as one currently being considered by any other National Institutes of Health awarding unit. Applications will be assigned to the most appropriate regular study section by the Division of Research Grants. The second level of review will be performed by an appropriate national advisory council or board. Funding decisions will be based on the above evaluations and on the availability of funds.

Review criteria considered in evaluating applications include:

- o Scientific merit and originality of research approach, design, and methodology;
- o Research experience and competence of the Principal Investigator and staff to conduct the proposed studies;
- o Documentation of appropriate collaborative arrangements;

- o Adequacy of time (effort) that the Principal Investigator and staff would devote to the proposed studies;
- o Adequacy of essential facilities and resources, or completeness and feasibility of the plans for their establishment.

The review group will recommend an appropriate budget for each approved application.

## VII. INQUIRIES

Inquiries concerning this announcement should be directed to:

Genrose Copley, M.D.  
 Extramural Programs Branch  
 Epidemiology and Biostatistics Program  
 Division of Cancer Etiology  
 National Cancer Institute  
 Executive Plaza North, Suite 535  
 Bethesda, MD 20892  
 Telephone: (301) 496-9600

This program is described in the Catalog of Federal Domestic Assistance No. 13.393, Cancer Cause and Prevention Research. Awards will be made under authorization of the Public Health Service Act, Title III, Section 301(c) and Section 402 (Public Law 78-410, as amended; 42 USC 241; 42 USC 282) 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.

### MINORITY INSTITUTIONAL RESEARCH TRAINING PROGRAM

PA: PA-90-13

P.T. 42, FF; K.W. 0720005, 0715040, 0715165, 0785070

National Heart, Lung, and Blood Institute

Application Receipt Date: August 22, 1990

The National Heart, Lung, and Blood Institute (NHLBI) announces a program to support full-time research training for investigative careers at minority schools in areas related to cardiovascular, pulmonary or hematologic diseases. Minority schools seeking this support must have: (1) graduate students or (2) health professional students who will take a minimum of one year from his/her professional training or (3) postdoctoral students. The support mechanism will be the NIH institutional research training grant. Copies of the program guidelines are currently available from staff of the NHLBI listed below.

Grants in this program will be made to minority institutions, each of which will cooperate with a research center that has a well-established cardiovascular, pulmonary or hematologic research and research training program. Each trainee will be placed with a mentor who is an accomplished investigator at the cooperating research center and who will assist the advisor at the minority institution in the trainee's development and research plan.

Guidelines for this program may be obtained from any of the following:

John Fakunding, Ph.D.  
 Chief, Research Training and Development Branch  
 Division of Heart and Vascular Diseases  
 National Heart, Lung, and Blood Institute  
 National Institutes of Health  
 Federal Building, Room 3C04  
 Bethesda, MD 20892  
 Telephone: (301) 496-1724

Diane Aiken  
 Division of Lung Diseases  
 National Heart, Lung, and Blood Institute  
 National Institutes of Health  
 Westwood Building, Room 640A  
 Bethesda, MD 20892  
 Telephone: (301) 496-7668

Helena Mishoe, Ph.D.  
Division of Blood Diseases and Resources  
National Heart, Lung, and Blood Institute  
National Institutes of Health  
Federal Building, Room 504d  
Bethesda, MD 20892  
Telephone: (301) 496-6931

This program is described in the Catalog of Federal Domestic Assistance number 13.837, 13.838, and 13.839. Award 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 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 Systems Agency review.

MINORITY SCHOOL FACULTY DEVELOPMENT AWARD

PA: PA-90-14

P.T. 34, FF; K.W. 0720005, 0715040, 0715165, 0785070

National Heart, Lung, and Blood Institute

Application Receipt Date: August 22, 1990

The National Heart, Lung, and Blood Institute (NHLBI) announces a program to encourage the development of faculty investigators at minority schools in areas relevant to cardiovascular, pulmonary and hematologic diseases and resources. Copies of the program guidelines are currently available from the staff of the NHLBI, listed below.

Grants in this program will be made to minority institutions on behalf of awardees, each of whom will work with a mentor at a nearby (within 100 miles) research center, who is recognized as an accomplished investigator in the research area proposed and who will provide guidance for the awardee's development and research plan.

Guidelines for this program may be obtained from any of the following:

John Fakunding, Ph.D.  
Chief, Research Training and Development Branch  
Division of Heart and Vascular Diseases  
National Heart, Lung, and Blood Institute  
National Institutes of Health  
Federal Building, Room 3C04  
Bethesda, MD 20892  
Telephone: (301) 496-1724

Joan M. Wollé, Ph.D., M.P.H.  
Division of Lung Diseases  
National Heart, Lung, and Blood Institute  
National Institutes of Health  
Westwood Building, Room 640  
Bethesda, MD 20892  
Telephone: (301) 496-7668

Helena Mishoe, Ph.D.  
Division of Blood Diseases and Resources  
National Heart, Lung, and Blood Institute  
National Institutes of Health  
Federal Building, Room 504d  
Bethesda, MD 20892  
Telephone (301) 496-6931

This program is described in the Catalog of Domestic Assistance Nos. 13.837, 13.838, and 13.839. 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 Regulation 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.

ERRATUM

ACADEMIC AWARD IN SYSTEMIC AND PULMONARY VASCULAR DISEASE

P.T. 34; K.W. 0715165, 0785035

National Heart, Lung, and Blood Institute

Application Receipt Date: October 22, 1990

**PURPOSE**

The following is a correction notice to reflect a change in the Program Announcement entitled, "Academic Award in Systemic and Pulmonary Vascular Disease," published in the NIH Guide for Grants and Contracts in Volume 19, No. 5, on February 2, 1990. The change relates to the minimum percent effort required by the Awardee.

The effective implementation of this Academic Award will require the support of individuals who have significant current research in some facet of vascular medicine, who have academic appointments which will allow a meaningful influence on the coordination of vascular disease within their institution, and who can provide clinical consultation and primary care, and leadership and guidance in education and research. Awardees are encouraged to devote 50 percent effort to developing, improving and implementing a vascular disease program. However, some individuals with these credentials may not be able to commit 50 percent effort as is currently required by the Guidelines. The National Heart, Lung, and Blood Institute, therefore, announces a decrease in the minimum percent effort required of the Awardee. Based on adequate justification, which should include significant time commitment to research activities in the area of vascular disease, prospective awardees may propose to commit less than 50 percent of their time to this Award. In no case will applications proposing less than 25 percent effort be considered responsive to this announcement.

The initial review process will consider the appropriateness of the proposed Awardee's percent effort in light of other proposed staff with support and coordinating responsibilities in the program. A description of significant research activities in the area of vascular disease must also be provided.

Program guidelines are available from staff of the National Heart, Lung, and Blood Institute as detailed in the NIH guide for Grants and Contracts, Vol. 19, No. 5, on February 2, 1990.

THE STUDY OF THE ETIOLOGY AND PATHOGENESIS OF INFLAMMATORY BOWEL DISEASE

PA: PA-90-05

P.T. 34; K.W. 0715085, 0765033, 0755030, 1002019, 0710070

National Institute of Diabetes and Digestive and Kidney Diseases and the National Institute of Allergy and Infectious Diseases

This program announcement was published in the NIH Guide for Grants and Contracts on April 27, 1990, Vol. 19, No. 17. That announcement omitted the National Institute of Allergy and Infectious Diseases as a co-sponsor of this program announcement.

\*\*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