

# NIH GUIDE

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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.

**Vol. 20, No. 2  
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## NOTICES

### SCIENTIFIC MISCONDUCT: LIVING WITH THE NEW REGULATIONS: THE FIRST YEAR

P.T. 42; K.W. 1014004, 1014006

National Institutes of Health

The Office of Scientific Integrity at the National Institutes of Health will hold three regional symposia to share experiences related to implementing the new regulations dealing with the Final Rule on "Responsibilities of Awardee and Applicant Institutions for Dealing With and Reporting Possible Misconduct in Science" (42 CFR Part 50, Subpart A). The symposia will feature open discussion of problems and solutions associated with implementing and operating under the new regulations. They will include sessions on assurance and reporting requirements, conduct of inquiries and investigations from development of the issues to resolution, jurisdictional issues, and due process issues. The symposia are intended to be of special interest to institutional officials responsible for instituting and overseeing the university's response to allegations of scientific misconduct. The symposia will be held in: Washington, DC on March 14-15; Seattle, WA on March 25-26; and New Orleans, LA on April 15-16. Attendance will be limited to 200 with no more than two representatives from each institution and will be on a first come first served basis. There will be a \$50 registration fee. To attend, please provide your name, institution or company, and payment to:

Social & Scientific Integrity  
7101 Wisconsin Avenue  
Suite 610  
Bethesda, MD 20814-4805  
Telephone: (301) 986-4870

or

Dr. Clyde A. Watkins  
Senior Scientist  
Office of Scientific Integrity  
National Institutes of Health  
Building 31, Room B1C39  
9000 Rockville Pike  
Bethesda, MD 20892

Make check payable to Social & Scientific Systems. Additional information will be sent upon request or upon receipt of reservation.

### NATIONAL WORKSHOPS ON "PROTECTION OF HUMAN SUBJECTS"

P.T. 42; K.W. 0783005

National Institutes of Health  
Food and Drug Administration

The National Institutes of Health (NIH) and the Food and Drug Administration (FDA) are continuing to sponsor a series of workshops on responsibilities of researchers, Institutional Review Boards (IRBs), and institutional officials for the protection of human subjects in research. The workshops are open to everyone with an interest in research involving human subjects. The meetings should be of special interest to those persons currently serving or about to begin serving as a member of an IRB. Issues discussed at these workshops are relevant to all other Public Health Service agencies. The current schedule includes the following:

#### I. SOUTHWEST WORKSHOP

DATES: February 4-5, 1991

WORKSHOP SITE:  
Meridien Hotel  
50 Third Street  
San Francisco, CA 94103

SPONSOR:  
University of California at San Francisco  
Box 0400  
San Francisco, CA 94143

REGISTRATION CONTACT:  
Ms. Phyllis Colbert  
Workshop Contact Person  
University of California at San Francisco  
Box 0400  
San Francisco, CA 94143  
Telephone: (415) 476-1881

TOPIC: "The Use of Human Subjects in Research: AIDS as a Model of Complexity"

II. MIDEAST WORKSHOP

DATES: March 4-5, 1991

WORKSHOP SITE:  
Friday Center  
Laurel Hill Parkway  
Chapel Hill, NC 27599-1020

SPONSORS:  
University of North Carolina at Chapel Hill  
300 Bynum Hall  
Chapel Hill, NC 27599-4100

Shaw University  
118 E. South Street  
Raleigh, NC 27611

REGISTRATION CONTACT:  
Mr. Al Dawson  
Director  
Friday Center  
Laurel Hill Parkway  
C. B. 1020  
Chapel Hill, NC 27599-1020  
Telephone: (919) 962-1106

TOPIC: "Interpreting the Federal Code for the Protection of Human Subjects"

III. MIDWEST WORKSHOP

DATES: April 11-12, 1991

WORKSHOP SITE:  
Hyde Park Hilton  
4900 Lake Shore Drive  
Chicago, IL 60615

SPONSORS:  
University of Chicago  
970 East 58th Street  
Chicago, IL 60637

Chicago State University  
95th Street at King Drive  
Chicago, IL 60628

REGISTRATION CONTACT:  
Mr. Arnold L. Aronoff  
Associate Director  
Faculty and Administrative Services  
University Research Administration  
University of Chicago  
970 East 58th Street  
Chicago, IL 60637  
Telephone: (312) 702-8669

TOPIC: "Cultural Diversity, Ethics, and Research: A Workshop on Human Subject Protection"

NIH/FDA have planned national human subject protections workshops in other parts of the United States. For further information regarding these workshops contact:

Darlene Marie Ross  
Executive Assistant for Education  
Division of Human Subject Protections  
Office for Protection from Research Risks  
National Institutes of Health  
9000 Rockville Pike  
Bldg. 31, Room 5B43B  
Bethesda, MD 20892  
Telephone: (301) 496-8101

CONFERENCE: SCIENTIFIC INTEGRITY: MAJOR ISSUES FACED BY RESEARCH INSTITUTIONS

P.T. 42; K.W. 1014004, 1014006

National Institutes of Health

The National Institutes of Health, the Association of American Medical Colleges, and Harvard Medical School are co-sponsoring a working conference for scientists, administrators, and lawyers who have responsibility for implementing policies and regulations designed to ensure scientific integrity. The program is designed for maximum interaction between panelists and attendees, and among attendees themselves. The goal is to generate new perspectives for some of the most difficult problems faced by research institutions in dealing with matters of scientific integrity. The moderators and panelists will bring the perspectives of law, research, and administration to the issues of due process for accused, accuser and institution; ownership of research data; setting sanctions for misconduct; rehabilitation of scientists found guilty of scientific misconduct; and prevention of scientific misconduct. Samuel Thier, M.D., President, Institute of Medicine, will address the conference on the balance between university and government responsibilities for assurance of scientific integrity.

This conference meets the criteria for 11 credit hours in Category 1 of the Physician's Recognition Award of the AMA.

DATES: February 2-3, 1991

SITE: Hyatt Regency Hotel, Cambridge, MA

PROGRAM AND REGISTRATION INFORMATION: Telephone: (617) 432-1525

CONFERENCE: FOSTERING SCIENTIFIC INTEGRITY IN BIOMEDICAL RESEARCH

P.T. 42; K.W. 1014004, 1014006

National Institutes of Health

The National Institutes of Health (NIH), the Association of American Medical Colleges, and Washington University School of Medicine are co-sponsoring an interactive conference for biomedical investigators, research administrators, and university attorneys with an interest in fostering the integrity of scientists. The goals of the workshop are to discuss the scope of the problem of scientific misconduct; to identify perceived or real factors contributing to misconduct; to discuss the roles of Congress, NIH, and institutions in managing allegations of scientific misconduct; to examine how well specific institutions have dealt with allegations of fraud, plagiarism or other unacceptable scientific practices; to discuss any special ethical considerations associated with Industry/University ties; and to discuss the responsibilities of authors and collaborators in maintaining scientific integrity in research. Several break-out sessions will address focussed topics of particular concern.

This conference is approved for credit in AMA Category 1.

DATES: April 25-26, 1991

SITE: The Adams Mark Hotel, St. Louis, MO

PROGRAM AND REGISTRATION INFORMATION: Telephone: (800) 325-9862, interstate  
(314) 362-6893, in Missouri

NOTICES OF AVAILABILITY (RFPs AND RFAs)

ARTIFICIAL LUNG RESEARCH AND DEVELOPMENT

RFP AVAILABLE: NHLBI-HR-91-02

P.T. 34; K.W. 0740070, 0705065, 0706040

National Heart, Lung, and Blood Institute

The National Heart, Lung, and Blood Institute (NHLBI) has a requirement for the performance of research leading to the development of a new artificial lung or improvement upon an existing artificial lung for eventual implantation in pediatric or adult patients with acute or chronic respiratory failure. The device should be highly efficient, biocompatible, and able to remain in continuous use for more than 24 hours. The research will be performed in three phases: design and development, in vitro testing, and in vivo (animal) testing. Specifically, the implantable artificial lung should: 1) Exceed the efficiency of current devices to support blood gas exchange; 2) Avoid hemolysis, thrombosis, clots or emboli, and minimize or eliminate the need for systemic anticoagulation; 3) Be compatible with the body (e.g., non-toxic, non-corrosive, non-carcinogenic), impervious to body fluids, and stable in the biologic environment; 4) Not cause a clinically intolerable inflammatory response; 5) Not significantly compromise immunocompetence; 6) Be capable of reliable continuous operation for longer than 24 hours; and 7) Avoid heat build-up or obstruction of blood flow. THIS RFP EXCLUDES THE DEVELOPMENT OF EXTRACORPOREAL LIFE SUPPORT SYSTEMS WHICH ARE NOT DIRECTLY RELATED TO IMPLANTABLE SYSTEMS. RESEARCH ON MECHANICAL PROPERTIES AND BASIC MECHANISMS OF BLOOD-MATERIAL INTERACTIONS PER SE NOT DIRECTLY RELATED TO THE ARTIFICIAL LUNG IS EXCLUDED FROM THE RFP. DEVELOPMENT OF ANCILLARY COMPONENTS, CONTROL OF THE SYSTEM, AND STUDY OF FAILURE MECHANISMS ARE EXCLUDED FROM THIS RFP.

This announcement is not a request for proposal (RFP). It is anticipated that RFP NHLBI-HR-91-02 will be available on or about January 7, 1991, with proposals due on March 11, 1991. Copies of the RFP may be obtained by submitting a written request along with three (3) self-addressed mailing labels to:

National Heart, Lung, and Blood Institute  
Contracts Operations Branch, DEA  
Westwood Building, Room 654  
5333 Westbard Avenue  
Bethesda, MD 20892  
ATTN: Pamela S. Randall

The NHLBI expects to make two awards from this solicitation.

ROLE OF MONONUCLEAR PHAGOCYTES IN OPPORTUNISTIC INFECTIONS OF ORAL MUCOSA AND OTHER TISSUES IN AIDS PATIENTS

RFP AVAILABLE: NIH-NIDR-1-91-1R

P.T. 34; K.W. 0715008, 0715125, 1002004, 0755010

National Institute of Dental Research

The National Institute of Dental Research (NIDR) has a requirement to define the role of mononuclear phagocytes in opportunistic infections of oral mucosa and other tissues in AIDS patients. Preliminary evidence indicates that monocytes infected with replicating HIV-1 in vitro are unable to phagocytize and/or kill certain pathogens that frequently cause life-threatening disease and/or morbidity in AIDS patients. The contractor shall pursue the significance and the mechanism of this defect by: 1) examining the impact of HIV-1 infection in patients on the ability of macrophages to contain opportunistic pathogens in the target organs, 2) determining whether HIV-1 infection is directly responsible for the mononuclear phagocyte abnormalities in vitro, and 3) isolating mononuclear phagocytes from infected patients to directly assay their microbicidal activity and/or infection with HIV. These approaches require both patient materials obtained at autopsy and/or biopsy and in vitro analyses. The contractor must have access to approved biohazard facilities for working with HIV.

RFP NO. NIH-NIDR-1-91-1R will be available on or about January 21, 1991, with proposals due on or about March 4, 1991. The RFP package will be available upon written request to:

Marilyn R. Zuckerman  
Contracting Officer  
Contract Management Section  
National Institute of Dental Research  
National Institutes of Health  
Westwood Building, Room 521  
5333 Westbard Avenue  
Bethesda, MD 20892

The NIDR expects to make one award from this solicitation.

#### EVALUATION OF TREATMENTS FOR CLEFT LIP AND/OR PALATE

RFA AVAILABLE: DE-91-04

P.T. 34; K.W. 0755015, 0715148, 0785210, 0795005

National Institute of Dental Research

Letter of Intent Receipt Date: November 1, 1991  
Application Receipt Date: December 4, 1991

#### PURPOSE

The National Institute of Dental Research (NIDR) seeks research grant applications from United States and foreign institutions to conduct prospective and/or retrospective clinical trials evaluating treatment procedures for nonsyndromic, unilateral left lip and palate. This Request for Applications (RFA) is for a single competition with a receipt date of December 4, 1991.

#### RESEARCH OBJECTIVES

The objective of this RFA is to solicit applications for support of prospective and/or retrospective clinical trials to evaluate procedures widely used in the treatment of nonsyndromic, unilateral cleft lip and/or palate. It is not intended to support studies on bilateral and syndromic clefts or other major congenital or acquired craniofacial defects.

Examples of the types of issues that might be addressed include: effects of neonatal treatment with orthopedic devices on maxillary arch morphology; effects of alveolar bone grafting on the primary dentition; effects of timing of palatal repair on speech development; evaluation of palatal management procedures on velopharyngeal function; effects of palatal repair on middle ear pathology; and retrospective evaluations of long-term effects of treatments. This list is not intended to be inclusive and applicants are free to propose clinical trials concerning other issues in cleft treatment. It is essential that the majority of the specific aims can be met during the initial period of support (3-5 years).

It is likely that consortium arrangements will be required to assess sufficiently large numbers of patients or patient records. Applications from U.S. and foreign investigators and those including collaborative arrangements between U.S. and foreign investigators are encouraged.

#### MECHANISM OF SUPPORT

Support for this program will be through research project grants (R01). It is anticipated that up to four awards will be made, if a sufficient number of high quality applications is received. Although funds have been allocated for this program in NIDR's plans for Fiscal Years 1992 through 1996, award of grants resulting from this RFA is contingent upon receipt of appropriated funds for this purpose. Applicants may request up to five years of support. Subsequent support will be contingent upon program needs and grantees' performance, as determined by peer review. Policies that govern research grant programs of the National Institutes of Health will prevail.

Applicants are encouraged to seek support from other public sources, as well as private sector sources including foundations and industrial concerns, for studies that will complement and expand the research supported by the NIDR. A summary of the objectives and financial support for such studies must be included in the application.

## SPECIAL INSTRUCTIONS FOR INCLUSION OF WOMEN AND MINORITIES IN CLINICAL RESEARCH STUDIES

For projects involving clinical research, NIH requires applicants to give special attention to the inclusion of women and minorities in study populations. If women or minorities are not included in the study populations for clinical studies, a specific justification for this exclusion must be provided. Applications without such documentation will not be accepted for review.

### REVIEW PROCEDURES

Applications in response to this RFA will be reviewed by a Special Review Committee convened by the NIDR's Scientific Review Branch. Secondary review will be by the National Advisory Dental Research Council in May 1992.

Funding decisions will be based on the initial review group's and the National Advisory Dental Research Council's recommendations concerning scientific merit, program relevance and balance, total cost to the NIDR, and the availability of appropriated funds. The earliest funding date is July 1, 1992.

### APPLICATION PROCEDURES

It is recommended that prospective applicants contact program staff early in the planning phase of application preparation and that they submit a letter of intent no later than November 1, 1991. The letter should give a descriptive title of the proposed research; the name, address, and telephone number of the Principal Investigator; and names of other key personnel and collaborating institutions. A letter of intent is not binding nor is it a prerequisite for acceptance of an application but it will assist staff in planning for timely review of applications.

Applications must be submitted on form PHS-398 (Rev. 10/88), available in the business or grants office of most academic or research institutions or from the Division of Research Grants, National Institutes of Health.

Requests for copies of the full RFA, enquiries and letters of intent should be addressed to:

John D. Townsley, Ph.D.  
Extramural Program  
National Institute of Dental Research  
Westwood Building, Room 506  
Bethesda, MD 20892-4500  
Telephone: (301) 496-7807

This program is described in the Catalog of Federal Domestic Assistance No. 93.122. Awards will be made under authorization of the Public Health Service Act, Title IV, Part A (Public Law 78-410, as amended by Public Law 99-158, 42 USC 241 and 285), and administered under PHS grants policies and Federal Regulations 42 CFR Part 52 and 45 CFR Part 74. This program is not subject to the intergovernmental review requirements of Executive Order 12372 or Health Systems Agency review, April 6, 1988.

### RESEARCH CENTERS IN ORAL BIOLOGY

RFA AVAILABLE: DE-91-01

P.T. 04; K.W. 0715148, 0710030, 0785035, 0710070, 1002027, 1002019, 0710095

National Institute of Dental Research

Letter of Intent Receipt Date: June 1, 1991  
Application Receipt Date: September 16, 1991

### PURPOSE

The National Institute of Dental Research (NIDR) invites applications from United States institutions for support of Research Centers in Oral Biology (RCOB). The primary goal of the RCOB program is to broaden and strengthen the scientific base underlying the national capability to improve oral health. The RCOBs bring teams of investigators into collaborative relationships to conduct interdisciplinary and multidisciplinary research. Clinical research will be supported only to the extent that it is a direct extension of the basic research conducted by center investigators. The NIDR uses other mechanisms, including categorical centers and clinical core centers, to



support clinical research focussing on the principal oral diseases and conditions.

#### RESEARCH GOALS AND SCOPE

The RCOB program's primary goal is the expansion of the scientific base which underlies the nation's capability to prevent and control oral diseases and disorders and to improve oral health. The secondary goal is to create centers of excellence that will attract investigators of high quality to dental research, provide challenging opportunities for research training at all levels of career development, and serve as magnet organizations to foster productive research-related relationships with other institutions.

Support will be provided for interdisciplinary and multidisciplinary studies in basic biomedical research areas relevant to the mission of the NIDR. Examples of research areas that are particularly appropriate for study in a RCOB include: immunology; microbiology and virology; genetics; developmental biology; tissue structure and function; tissue repair and regeneration; salivary glands and secretions; nutrition; and neurobiology. Clinical research will be supported only to the extent that it is a direct extension of the basic research conducted by center investigators. Support for substantial clinical studies and clinical trials must be derived from other sources.

Support will not be provided for a research program that has as its single focus a categorical or thematic area already targeted by NIDR for support.

#### SPECIAL INSTRUCTIONS FOR INCLUSION OF WOMEN AND MINORITIES IN CLINICAL RESEARCH STUDIES

For projects involving clinical research, NIH requires applicants to give special attention to the inclusion of women and minorities in study populations. If women or minorities are not included in the study populations for clinical studies, a specific justification for this exclusion must be provided. Applications without such documentation will not be accepted for review.

#### MECHANISM OF SUPPORT

RCOBs will be supported for five years with funding projected to start on December 1, 1992. Renewal support will be contingent upon program needs and an institution's ability to compete successfully in response to a Request for Applications (RFA). Awards are contingent upon the availability of appropriated funds. All policies and requirements that govern the research grant programs of the PHS will apply to the awards. The NIDR anticipates making four awards, not to exceed \$750,000 each in direct costs for the first year of the award if a sufficient number of applications of high scientific merit are received. Applicants are encouraged to seek complementary support from other federal government or nonfederal sources.

#### REVIEW PROCEDURES

Applications will be evaluated for scientific merit by a special review committee convened by the NIDR Scientific Review Branch. Prior to the initial review, a triage mechanism may be employed to screen out applications that are noncompetitive or nonresponsive to the RFA. An applicant interview or site visit may be included. Secondary review will be conducted by the National Advisory Dental Research Council. Applications in response to this announcement must be received by September 16, 1991, so they can be reviewed and considered for funding in Fiscal Year 1993.

#### APPLICATION PROCEDURES

Prospective applicants should communicate with program and grants management staff of the Institute's Extramural Program as early as possible in the planning phase of application preparation. Advice and suggestions by staff may materially assist applicants to ensure that the RCOB's objectives and structure and the budget format are acceptable. At a minimum, prospective applicants are urged to submit by June 1, 1991, a letter of intent that identifies this RFA; includes a descriptive title for the RCOB, each component and project; gives the name, address and telephone number of the Director, and the names of other key personnel; and identifies participating institutions and departments. It should be addressed to the Director, Extramural Program, NIDR. The letter of intent is not binding nor is it a prerequisite for acceptance of an application but it will assist staff in planning for the timely review of applications.

Applications must be prepared on Form PHS 398 (Rev. 10/88), Application for PHS Grant, which can be obtained from the Division of Research Grants, NIH, or

from the institution's Office of Research and Sponsored Programs. Detailed instructions for preparing an application are included in the complete RFA.

#### INQUIRIES

Requests for copies of the complete RFA and for additional information should be addressed to:

Director  
Extramural Program  
National Institute of Dental Research  
National Institutes of Health  
Westwood Building, Room 503  
5333 Westbard Avenue  
Bethesda, MD 20892-4500  
Telephone: (301) 496-7723

This program is described in the Catalog of Federal Domestic Assistance No. 93.845. 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.

#### ONGOING PROGRAM ANNOUNCEMENTS

##### INVESTIGATIONS INTO METHODS THAT REPLACE OR REDUCE VERTEBRATE ANIMALS USED IN RESEARCH, OR LESSEN THEIR PAIN AND DISTRESS

PA: PA-91-20

P.T. 34; K.W. 0755020, 0780010, 0780015, 0780020

National Institutes of Health  
Alcohol, Drug Abuse, and Mental Health Administration

#### BACKGROUND

The National Institutes of Health (NIH) and the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA) invite grant applications for investigations into research methods that do not use vertebrate animals, use fewer vertebrate animals, or produce less pain and distress in vertebrate animals used for research.

Biomedical research will be most effectively advanced by the continuous use of a combination of models in a complementary and interactive manner, rather than by concentrating on any one or a few kinds of model systems. Each system, whether mammalian or nonmammalian, has its own unique advantages and limitations. Because of a continued, wide interest in the development of nonmammalian models for biomedical research, this ongoing NIH/ADAMHA-wide Program Announcement (PA) is being reissued to encourage the submission of applications in this area.

Proposals for the study of invertebrates, lower vertebrates, microorganisms, cell and tissue culture systems, or mathematical approaches should be regarded as having the same potential relevance to biomedical research as proposals for work on systems that are phylogenetically more closely related to humans. Experience indicates that information yielded by such systems can increase substantially the knowledge of human function.

Animals are essential to the advancement of knowledge in the biomedical sciences. Non-animal research methods can, and do, provide additional opportunities to advance our understanding of biological processes. For example, biological models or model systems derived from, or consisting of, nonmammalian organisms, or cell and tissue culture systems, may provide valuable insights into mechanisms of biological functions that are more difficult to obtain from studies of whole vertebrate animals. Mathematical modeling is another useful investigational strategy when closely coupled to biological experimentation, and there are opportunities for mathematical modeling in many areas of biomedical research. Non-invasive experimental techniques, permitting studies of biological processes in intact animals, can reduce the number of experimental animals since multi-step phenomena can be observed in a single subject. Such technologies often permit studies otherwise impossible to perform.

Many strategies are currently in place to reduce the pain and distress of laboratory animals; however, new methods and technologies are encouraged.

#### RESEARCH GOALS

Grant applications are requested for projects that will increase the extent and depth of knowledge needed to develop methods of biomedical research that:

- o do not require the use of vertebrate animals
- o reduce the number of vertebrate animals used in research
- o produce less pain and distress in vertebrate animals than methods currently used
- o validate or demonstrate the reliability of non-animal methods
- o expand non-vertebrate animal research methods that have been found valid and reliable

#### MECHANISM OF SUPPORT

The support mechanisms for this program include the individual investigator-initiated research project grant (R01), the FIRST award (R29), small grants program (R03), program project grants (P01), and small business innovation research (SBIR) grants (R43, R44). Under these mechanisms, the applicant will plan, direct, and carry out the research program. The project period during which the research will be conducted should adequately reflect the time required to accomplish the stated goals and be consistent with the policy for grant support. Support will be provided for up to five years (renewable for subsequent periods) subject to the availability of funds and progress achieved.

Research grant applications may be submitted by both nonprofit and profit-making organizations and institutions, State or local governments and their agencies, and eligible agencies of the Federal Government.

#### APPLICATIONS AND REVIEW PROCEDURES

Applications in response to this solicitation will be peer reviewed for scientific and technical merit. They will be judged on the overall scientific merit of the proposed research, potential significance of the research findings, adequacy of methodology, availability of necessary facilities, and the qualifications of the research team. A secondary review for policy and program relevance to the research needs and missions of the Institute or Center to which the proposal is assigned will be made by the respective National Advisory Council or Board.

Applications for other than SBIR support must use PHS Form 398 (rev. 10/88), "Application for Public Health Service Grant". SBIR applicants must use the form PHS-6246-1. Send the original and six copies of the application to the Division of Research Grants, NIH as described in the PHS application kit.

Applicants should check the box marked "yes" in item 2 of the PHS 398 face page, and enter the PA number and title on line 2.

Applicants are encouraged to contact Dr. Ramm at the address below prior to submitting an application:

Dr. Louise E. Ramm  
Director, Biological Models and Materials Research Program  
National Center for Research Resources, NIH  
Westwood Building, Room 8A07  
Bethesda, MD 20892  
Telephone: (301) 402-0630

Program staff in other participating NIH and ADAMHA Institutes and Centers may also be contacted:

National Cancer Institute  
Dr. J.A.R. Mead  
Chief, Grants and Contracts Operations Branch  
Developmental Therapeutics Program  
Division of Cancer Treatment  
Executive Plaza North, Room 832  
Bethesda, MD 20892  
Telephone: (301) 496-8783

National Center for Nursing Research  
Dr. Jan Heinrich  
Director, Extramural Programs  
Building 31, Room 5B03  
Bethesda, MD 20892  
Telephone: (301) 496-0523

National Eye Institute  
Dr. Ralph J. Helmsen  
Research Training and Resources Officer  
Building 31, Room 6A48  
Bethesda, MD 20892  
Telephone: (301) 496-5983

National Institute of Allergy and Infectious Diseases  
Dr. Luz A. Froehlich  
Deputy Director  
Westwood Building, Room 703  
Bethesda, MD 20892  
Telephone: (301) 496-7688

National Institute on Aging  
Dr. DeWitt Hazzard  
Head, Resource Development  
Biology of Aging Program  
Building 31, Room 5C21  
Bethesda, MD 20892  
Telephone: (301) 496-6402

National Institute of Arthritis and Musculoskeletal and Skin Diseases  
Dr. Michael Lockshin  
Director, Extramural Program  
Building 31, Room 4C32  
Bethesda, MD 20892  
Telephone: (301) 496-0802

National Institute of Child Health and Human Development  
Ms. Hildegard P. Topper  
Special Assistant to the Deputy Director  
Building 31, Room 2A-03  
Bethesda, MD 20892  
Telephone: (301) 496-0104

National Institute on Deafness and Other Communication Disorders  
Dr. Ralph F. Naunton  
Acting Director, Extramural Programs  
Executive Plaza South  
Room 750  
6120 Executive Boulevard  
Rockville, MD 20892  
Telephone: (301) 496-1804

National Institute of Dental Research  
Dr. G. Wayne Wray  
Deputy Director, Extramural Program  
Westwood Building, Room 503  
Bethesda, MD 20892  
Telephone: (301) 496-7723

National Institute of Diabetes and  
Digestive and Kidney Diseases  
Dr. Walter Stolz  
Director, Division of Extramural Activities  
Westwood Building, Room 657  
Bethesda, MD 20892  
Telephone: (301) 496-7277

National Institute of Environmental Health Services  
Dr. Jerry Robinson  
Scientific Programs Branch  
Division of Extramural Research and Training  
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#### PREVENTION OF LOW BIRTH WEIGHT

PA: PA-91-21

P.T. 34; K.W. 0785035, 0775015, 0404004, 0403020

National Center for Nursing Research  
National Institute of Child Health and Human Development

#### PURPOSE

This program announcement is designed to stimulate clinical research in the area of prevention of low birth weight (LBW) infants. Applications that examine the psychosocial and/or biobehavioral mechanisms of premature labor or intrauterine growth retardation and the effectiveness of interventions to prevent LBW are of high priority. Interdisciplinary, collaborative projects between nurses, physicians, physiologists, and behavioral scientists are encouraged.

#### SCIENTIFIC BACKGROUND

Although the decline in U.S. infant mortality (the number of deaths in children under one year of age per 1,000 live births) in a given year has dropped dramatically from 21.8 in 1968 to 9.73 per 1,000 live births in 1989, the decline has leveled off since the late 1970s. Low birth weight infants (LBW=<2.5 kg) account for 6.9 percent of all U.S. live births or more than 250,000 LBW infants and 50,000 VLBW (<1.5 kg) infants per year. Of particular concern is the increased LBW rate in the black population where the disparity between black and white infant LBW rates and mortality is roughly double.

LBW represents a major source of U.S. infant morbidity and mortality. LBW is the second leading cause of death of infants, after birth defects. LBW infants are 40 times more likely to die during their first month of life and two to three times more likely to suffer from chronic handicapping conditions such as blindness, mental retardation, and deafness.

Risk factors associated with LBW include maternal age, poverty, race, low education levels, multiparity, and inadequate prenatal care. Maternal behaviors such as substance abuse, smoking, alcohol consumption, and excessive exercise or standing increase the incidence of premature labor and/or intrauterine growth retardation. Maternal smoking cessation is a very effective means to improve birth weight. However, it is a behavioral change that is hard to maintain.

Although less common than alcohol and smoking, substance abuse is a problem of epidemic proportions among pregnant women: it has quadrupled between 1985 and 1989. Estimates of the number of infants exposed to crack cocaine range from 100,000 to 350,000. Concomitant increases in AIDS, syphilis, inadequate nutrition, violence, and physical abuse have accompanied the dramatic increases in substance abuse in pregnant women.

Our information base on other potential contributors to premature labor and/or intrauterine growth retardation, such as environmental factors, strenuous physical activity, high levels of anxiety, stress, depression, and genetic factors, is limited.

Recent evidence suggests that prenatal care is beneficial to all women, and particularly to those minority and low-income women who are at highest risk for delivering LBW infants. Despite evidence of increased benefit from prenatal care, the percentage of pregnant black women who had no prenatal care increased disproportionately between 1980 and 1987 compared to white women.

Interventions by nurses and other health-care providers are key components of prenatal care, as described in the recent report of the Public Health Service Expert Panel on the Content of Prenatal Care, Caring for Our Future: The Content of Prenatal Care. This report suggested that access to prenatal care should be improved and that prenatal care should be expanded to include (1) early and continuing risk assessment, (2) health promotion, and (3) medical and psychosocial interventions and followup. The recommendations suggest a number of promising strategies for future intervention trials designed to recognize cultural and ethnic differences.

#### AREAS OF INTEREST

- o Studies that increase the understanding of factors that help women assume healthy life styles versus risk-taking behavior
- o Development of intervention models for reducing risk-taking behavior, including smoking cessation, reduced alcohol consumption, and improved nutrition
- o Studies that determine the effects of stress, anxiety, depression, fatigue, and adverse home and work environments on birth weight outcome
- o Development of effective intervention models (including home visits) for reducing the impact of significant adverse psychological and environmental effects on low birth weight outcomes
- o Studies that assess both the efficacy of biological monitoring techniques in preventing preterm delivery and the effects of self-monitoring on pregnant women
- o Studies that assess the efficacy of new modes of delivery of prenatal care.

#### PROGRAMMATIC BACKGROUND

This initiative was developed to study factors that may be effective in preventing preterm delivery, particularly those related to nursing practice. An interdisciplinary expert panel convened by the National Center for Nursing Research has defined gaps in existing knowledge related to the prevention of preterm delivery and has identified research opportunities in two major areas: the prevention of premature labor and intrauterine growth retardation. These areas should be approached through innovative intervention studies related to maternal behavior and life style, environmental risks, and the biobehavioral interface.

Prospective, longitudinal, interdisciplinary studies are encouraged. This initiative is part of a series of initiatives related to the prevention and care of LBW infants.

#### SPECIAL INSTRUCTIONS TO APPLICANTS REGARDING IMPLEMENTATION OF NIH POLICIES CONCERNING INCLUSION OF WOMEN AND MINORITIES IN CLINICAL RESEARCH STUDY POPULATIONS

NIH and ADAMHA policy is that applicants for NIH/ADAMHA clinical research grants and cooperative agreements will be required to include minorities and women in study populations so that research findings can be of benefit to all persons at risk of the disease, disorder or condition under study; special emphasis should be placed on the need for inclusion of minorities and women in studies of diseases, disorders and conditions which disproportionately affect them. This policy is intended to apply to males and females of all ages. If women or minorities are excluded or inadequately represented in clinical research, particularly in proposed population-based studies, a clear compelling rationale should be provided.

The composition of the proposed study population must be described in terms of gender and racial/ethnic group. In addition, gender and racial/ethnic issues should be addressed in developing a research design and sample size appropriate for the scientific objectives of the study. This information should be included in the form PHS 398 in Section 2, A-D of the Research Plan AND summarized in Section 2, E, Human Subjects. Applicants/offers are urged to assess carefully the feasibility of including the broadest possible representation of minority groups. However, NIH recognizes that it may not be feasible or appropriate in all research projects to include representation of the full array of United States racial/ethnic minority populations (i.e., Native Americans (including American Indians or Alaskan Natives), Asian/Pacific Islanders, Blacks, Hispanics).

The rationale for studies on single minority population groups should be provided.

For the purpose of this policy, clinical research includes human biomedical and behavioral studies of etiology, epidemiology, prevention (and preventive strategies), diagnosis, or treatment of diseases, disorders or conditions, including but limited to clinical trials.

The usual NIH policies concerning research on human subjects also apply. Basic research or clinical studies in which human tissues cannot be identified or linked to individuals are excluded. However, every effort should be made to include human tissues from women and racial/ethnic minorities when it is important to apply the results of the study broadly, and this should be addressed by applicants.

For foreign awards, the policy on inclusion of women applies fully; since the definition of minority differs in other countries, the applicant must discuss the relevance of research involving foreign population groups to the United States' populations, including minorities.

If the required information is not contained within the application, the application will be returned.

Peer reviewers will address specifically whether the research plan in the application conforms to these policies. If the representation of women or minorities in a study design is inadequate to answer the scientific question(s) addressed AND the justification for the selected study population is inadequate, it will be considered a scientific weakness or deficiency in the study design and will be reflected in assigning the priority score to the application.

All applications for clinical research submitted to NIH are required to address these policies. NIH funding components will not award grants or cooperative agreements that do not comply with these policies.

#### MECHANISMS OF SUPPORT

All policies and requirements that usually govern the research grant programs of the Public Health Service apply. The particular research grant mechanisms for this announcement are the traditional research grant award (R01) and the First Independent Research Support and Transition (FIRST) award (R29).

#### APPLICATION PROCEDURES AND REVIEW CRITERIA

Applications should be submitted on the standard PHS Form 398 (rev. 10/88). Application forms are available at most institutional business offices or from

the Division of Research Grants, NIH, telephone (301) 496-7441. In order to expedite the application routing within NIH, please (1) check the box #2 on the face page indicating that your application is in response to this announcement and (2) print (next to the checked box) "Prevention of LBW, PA-91-21." Mail the completed application and six copies to:

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

Receipt dates for applications are February 1, June 1, and October 1.

Applications will be reviewed for scientific and technical merit by an appropriate study section in the Division of Research Grants. Second level review will be conducted by a National Advisory Council.

Applications compete on the basis of scientific merit with all other applications. Researchers considering an application in response to this announcement are encouraged to discuss their project and the range of the grant mechanisms available with NCNR staff in advance of formal submission.

Correspondence and inquiries should be directed to:

Dr. Sharlene Weiss  
Health Promotion/Disease Prevention Branch  
National Center for Nursing Research  
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or

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This program is described in the Catalog of Federal Domestic Assistance No. 93.361, Nursing Research and No. 93-865, Research for Mothers and Children. Awards are under authorization of the Public Health Service Act, Title IV, Part A (Public Law 78-410, as amended by Public Law 99-158, 42 USC 241 and 285 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 to Health Systems Agency review, April 6, 1988.

\*\*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