

NIH Guide for Grants and Contracts

U.S. DEPARTMENT OF HEALTH
AND HUMAN SERVICES

Vol. 14, No. 2, February 1, 1985

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The NIH Guide is published at irregular intervals to announce scientific initiatives and to provide policy and administrative information to individuals and organizations who need to be kept informed of opportunities, requirements, and changes in grants and contracts activities administered by the National Institutes of Health.

Two types of supplements are published by the respective awarding units. Those printed on yellow paper concern contracts: solicitations of sources and announcement of availability of requests for proposals. Those printed on blue paper concern invitations for grant applications in well-defined scientific areas to accomplish specific program purposes.

Have You Moved?

If you present address differs from that shown on the address label, please send your new address to: Grants and Contract Guide Distribution Center, National Institutes of Health, Room B3BN10, Building 31, Bethesda, Maryland 20205, and attach your address label to your letter. Prompt notice of your change of address will prevent your name from being removed from our mailing list.

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ERRATUM

In the Index for the NIH Guide for Grants and Contracts Vol. 14, No. 1, January 4, 1985, an error was made in placing an Announcement, Notice of Availability, Small Business Innovative Research Program, National Institutes of Health. The correct placement for this Notice of Availability should be under SMALL BUSINESS in the Index.

NOTICE

NIA APPLICANTS FOR SMALL RESEARCH GRANT AWARD (R03)

P.T. 34; K.W. 0710010, 0710030

NATIONAL INSTITUTE ON AGING

Effective with the receipt of Small Research Grant applications for the February 1, 1985 deadline, the National Institute on Aging will discontinue expedited review of these applications. Applications will continue to be accepted for the usual February 1, June 1, and October 1 deadlines. Earliest possible award date requested should be six months from date of submission.

It is no longer necessary to send advance copies of the NIA Small Research Grant applications to the Scientific Review Office/OPEA/NIA in view of the elimination of expedited review.

ANNOUNCEMENT

SOLICITATION FOR RESEARCH GRANT PROPOSALS

P.T. 34; K.W. 1007001, 0725005, 1007005, 1007008

ENVIRONMENTAL PROTECTION AGENCY

The U.S. Environmental Protection Agency (EPA), Office of Exploratory Research announces the availability of its Fiscal Year 1985 booklet entitled "Solicitation for Research Grant Proposals." EPA peer reviews and awards investigator initiated research grants in the areas of environmental biology, health, engineering, and chemical/physical measurements of air and water. For more information, call (202) 382-7473 or write to:

Office of Exploratory Research (RD-675)
Office of Research and Development
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

NOTICE

BLOOD, SERUM AND TISSUE DISTRIBUTION PROGRAM

YERKES REGIONAL PRIMATE RESEARCH CENTER OF EMORY UNIVERSITY

P.T. 36; K.W. 0780020, 0750010

DIVISION OF RESEARCH RESOURCES

The Yerkes Regional Primate Research Center provides a variety of tissue and fluid specimens from nonhuman primates for use in biomedical research. Specimens available include whole blood, serum or plasma; urine; tissues collected at autopsy or by biopsy; and cadavers following autopsy. Specimens can be provided fresh, in tissue culture media, frozen or formalin-fixed. Specimens are routinely available from macaques (primarily rhesus) and squirrel monkeys and are periodically available from chimpanzees, orangutans, gorillas and gibbons. A clinical history of the donor animal is available for each specimen. A nominal fee and shipping and handling charges are required.

This tissue distribution program is supported, in part, by the Division of Research Resources (DRR).

For more information, call or write:

Dr. Harold M. McClure
Associate Director for Scientific
Programs and
Chief, Division of Pathobiology
and Immunobiology
Yerkes Regional Primate Research Center
Emory University
Atlanta, Georgia 30322

Telephone: (404) 329-7742

ANNOUNCEMENT

AVAILABILITY OF REQUEST FOR APPLICATIONS: RFA

85-CA-10

THE ROLE OF HUMAN PAPILLOMAVIRUSES IN THE ETIOLOGY OF CERVICAL
CANCER

P.T. 34; K.W. 1002045, 0715035, 0755030, 0715125

NATIONAL CANCER INSTITUTE

Application Receipt Date: June 1, 1985

I. BACKGROUND

Cervical cancer continues to be a major health problem in the United States. Invasive cervical carcinoma and carcinoma in situ represent 3% and 11% respectively of all cancers diagnosed in women. In the past, it had been suggested that this neoplasm and its putative precursor, cervical dysplasia, may be associated with viral infections of the cervix. Recently, a number of laboratory investigations have more strongly associated human papillomaviruses (HPVs) with cervical dysplasia and carcinoma. The presence of HPV DNA has been demonstrated in both cervical carcinomas and dysplasias. In one study, 70-90% of cervical tumors contained DNA from either HPV types 16 or 18. In addition, mild dysplasia appeared to be associated with the presence of DNA from HPV types 6 or 11. A number of established cervical tumor cell lines, e.g., HeLa, have also been examined and found to possess DNA segments of HPV type 18. HPV antigens and cytological markers have also been detected in a large percentage of dysplasias examined.

To firmly establish a viral etiology for cervical carcinoma and/or dysplasia, a study of the putative progression of primary genital papillomavirus infection to dysplasia and carcinoma is needed. Little is known about the temporal relationships or physiological mechanisms involved in such a progression. In order to carry out a study of the progression, more information is needed about the basic mechanisms of virus transmission, infection, replication and oncogenic transformation.

This program is described in the Catalog of Federal Domestic Assistance No. 13.393, Cancer Etiology Research. Awards are under authorization of the Public Health Service Act, Title IV, Part A (Public Law 78-410, as amended; 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.

II. GOALS AND SCOPE

The objective of this RFA is to stimulate basic research on the putative progression of HPV infections to dysplasia and carcinoma in human subjects and to relate this progression to the molecular biology of human papillomaviruses. Examples of such studies (which are not all encompassing) are 1) elucidation of the mechanisms of viral infection, replication and oncogenic transformation; 2) development of better in vitro model systems for HPV transformation and growth using either wild type or genetically engineered HPVs; 3) determination of the rates of regression or progression of cervical lesions in HPV infected subjects; 4) functional and structural characterization of HPV encoded proteins with particular regard to their role in oncogenesis and tissue specificity; 5) determination of the HPV types associated with specific categories of cervical lesions; 6) the nature of the host's response to HPV; and 7) the co-presence and possible involvement of other viral agents, such as HSV and CMV, with HPV in the oncogenic process.

III. MECHANISM OF SUPPORT

Awards will be made as research project grants. Responsibility for the planning, direction and execution of the proposed research will be solely that of the applicant. The total project period for applications submitted in response to the present RFA should not exceed five years. Approximately \$850,000 will be set aside to specifically fund applications which are submitted in response to this RFA. It is anticipated that six to seven applications will be funded. This funding level is dependent on the receipt of a sufficient number of applications of high scientific merit. Although this program is provided for in the financial plans of the National Cancer Institute (NCI), the award of grants pursuant to this RFA is also contingent upon the availability of funds for this purpose. Non-profit and for-profit institutions within the United States may apply. All applications submitted in response to this announcement will be classified as new grants (Type 1). Future competitive renewal applications of grants funded under this RFA will compete with all other unsolicited applications received by the NCI. PHS grant policies governing regular research project grants, including cost sharing, apply to applications received in response to this request.

IV. INQUIRIES

A copy of the complete RFA describing the research goals and scope, the review criteria and the method of applying can be obtained by contacting:

Dr. Alan A. Schreier
Biological Carcinogenesis Branch
Division of Cancer Etiology
National Cancer Institute
Landow Building - Room 9A-22
Bethesda, Maryland 20205

Telephone: (301) 496-1953

Inquiries concerning this announcement are encouraged and should be directed to Dr. Alan A. Schreier of the above address and phone number. The program would appreciate the opportunity to clarify any issues or questions.

ANNOUNCEMENT

OSTEOGENESIS IMPERFECTA

P.T. 34; K.W. 0705050, 0760005, 1003001, 1002019, 1002008, 0755020

NATIONAL INSTITUTE OF ARTHRITIS, DIABETES, AND DIGESTIVE AND KIDNEY DISEASES

NATIONAL INSTITUTE OF DENTAL RESEARCH

The Musculoskeletal Diseases Program of the National Institute of Arthritis, Diabetes, and Digestive and Kidney Diseases (NIADDK), in cooperation with the National Institute of Dental Research (NIDR), is encouraging the submission of applications for research grants in osteogenesis imperfecta (OI) and related basic studies on the molecular structure of collagen.

Osteogenesis imperfecta is one of the most common forms of heritable disorders of connective tissue. It is a group of genetic disorders that result from molecular defects of connective tissue leading to a weakened skeleton with varying degrees of liability to bone fractures. Associated features in some, but not all, affected individuals include blueness of the sclerae, presenile hearing loss, dentinogenesis imperfecta, hyperextensibility of ligaments, and cardiovascular complications. Currently, classification for OI includes four types and two subtypes of clinical symptoms.

Collagen defects are generally accepted as major factors in causing OI. Structural or regulatory mutations have been shown within the gene coding for Type 1 collagen chains. These mutations lead variably to reduced synthesis of structurally normal collagen, to production of a molecule lacking the normal 2:1 chain ratio, or to the synthesis of a molecule containing a defective chain. In any case, tissues fail to accumulate sufficient normal collagen to provide an adequate scaffold for skeletal strength and for somatic growth. Other studies suggest that abnormalities of certain non-collagenous proteins, such as osteonectin, may also be present in OI.

This program is described in the Catalog of Federal Domestic Assistance No. 13.846, Arthritis, Bone and Skin Diseases Research and No. 13.842 - Craniofacial Anomalies, Pain Control and Behavioral 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 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.

Now that there appear to be several biochemical bases for OI, the NIADDK is seeking grant applications aimed at applying this information to larger groups of patients with this disease in its various forms. There is a need to determine the relative frequencies of each of the molecular defects that have been and will be discovered in OI. These studies can utilize either techniques of protein chemistry or molecular biology to characterize the primary biochemical abnormalities. It may be valuable to recreate the abnormality in cultured cells or animal hosts using gene transfer technology. Further use should be made of existing bovine models of OI.

Research applications could also focus on specific clinical applications of emerging new technologies. Novel and rapid methods to pinpoint mutations within the collagen genome and utilization of oligonucleotide probes to identify individuals carrying a specific mutation need to be developed. Families in which the presence of OI can be identified by a biochemical marker could be studied to determine the predictability of clinical manifestations, quantitative measures of bone mass, histomorphology of bone, and specific therapeutic modalities in OI patients at varying ages.

I. METHOD AND CRITERIA OF REVIEW

A. Assignment of Applications

Applications will be received by the NIH's Division of Research Grants (DRG), referred to an appropriate initial review group for scientific review, and assigned to the NIADDK or NIDR for possible funding. These decisions will be governed by programmatic considerations as specified in the DRG Referral Guidelines.

B. Review Procedures

Applications in response to this announcement will be reviewed in accord with the National Institutes of Health Peer review procedures. They will first be reviewed for scientific and technical merit by a review group composed mostly of non-Federal scientific consultants. Following initial review, the application will be evaluated for program relevance by the Advisory Council of the Institute to which the application is assigned. Review criteria customarily employed by the National Institutes of Health (NIH) for regular research grant applications will prevail. Approved applications will compete for available funds with other approved grant applications assigned to the NIADDK or NIDR.

C. Deadline

Applications will be accepted in accordance with the announced receipt dates for new applications (see receipt dates and review schedule in application kits).

D. Method of Applying

Applications for research grants should be submitted on form PHS 398, which is available in the business or grants and contracts office at most academic and research institutions. On page 1, item 2 the "yes" block should be checked and the phrase "ANNOUNCEMENT OF RESEARCH INTEREST IN OSTEOGENESIS IMPERFECTA" typed.

The original and six copies of the application should be sent or delivered to:

Applications Receipt Office
Division of Research Grants
National Institutes of Health
Westwood Building - Room 240
Bethesda, Maryland 20205

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

Stephen L. Gordon, Ph.D.
Musculoskeletal Diseases Program Director
National Institute of Arthritis, Diabetes,
and Digestive and Kidney Diseases
National Institutes of Health
Westwood Building - Room 407
Bethesda, Maryland 20205

Telephone: (301) 496-7326

John D. Townsley, Ph.D.
Chief, Craniofacial Anomalies, Pain
Control and Behavioral Research Branch
Extramural Program
National Institute of Dental Research
National Institutes of Health
Westwood Building - Room 506
Bethesda, Maryland 20205

Telephone: (301) 496-7807

ANNOUNCEMENT

STUDIES ON EXERCISE PHYSIOLOGY AND AGING

P.T. 34; K.W. 0745030, 0710010, 1002034, 0710030, 0785055, 0201018, 0710095

NATIONAL INSTITUTE ON AGING

I. BACKGROUND INFORMATION

The National Institute on Aging (NIA) was established in 1974 to support and conduct biomedical, behavioral, and social research and training related to aging and to diseases and other special problems and needs of the elderly. The Exercise Physiology Section of the Physiology of Aging Branch, which is part of the Biomedical and Clinical Medicine Research Program of the NIA, has the responsibility for developing and supporting research which clarifies the influence of physical activity on the well-being of the elderly, both the healthy elderly and those afflicted by disease. To fulfill this responsibility, the major objectives of the Exercise Physiology Section are a) to define how the aging process affects adaptational biological responses to both acute and long-term physical activity and b) to assess how physical activity, particularly long-term type training, is involved in the promotion and maintenance of health and in the prevention of age-related diseases and disorders.

II. RESEARCH GOALS AND SCOPE

This announcement emphasizes the need for research in exercise physiology and exercise medicine as related to aging processes and age-related diseases and disorders. Of essential concern is the question "To what extent and under which conditions is the recommendation of physical activity for either healthy or disease-afflicted elderly medically reasonable?" Research directed to answering this question may be either basic or clinical by nature and may involve not only healthy human subjects and patients, but also suitable animal models. Approaches to this kind of research may range from cell biology to whole organism. The latter may include epidemiological studies on populations as well. To investigate the influence of physical activity on well-being in the elderly, it is imperative in research design to attempt to separate effects of primary aging from effects of both underlying disease and disuse atrophy.

Research areas of particular interest to the NIA include:

- o Studies to elucidate how mechanisms for biological adaptation to exercise, from system/organ level to cell/molecular level, are influenced by aging.
- o Studies to examine mechanisms through which regular exercise increases the capacity for work in the elderly and the relation this may have to health promotion and disease prevention.
- o Studies to assess the role and to define the mechanism of regular physical activity in preventing and/or reducing the extent of age-related diseases and disorders.

- o Studies to define quantitatively the criteria by which the prescription of exercise is safely formulated to fulfill individual needs of healthy elderly and of people in older age categories affected by various kinds of disease.
- o Studies to assess the role of acute and chronic exercise in the regulation of immunologic events involved in resistance to and recovery from infectious diseases in the elderly.
- o Studies to examine the mechanisms through which physical activity regulates behavior and psychosocial function in the elderly.
- o Studies to define the relationship between exercise and nutrition in providing independent and healthy years for the elderly.

III. MECHANISM OF SUPPORT

Support for this program will be the grant-in aid. Different mechanisms through which an award may be made by NIA are available and include: traditional Research Project Awards; Program Project Awards; New Investigator Awards; Academic Investigator Awards; Clinical Investigator Awards; Physician-Scientist Awards; Research Career Development Awards; and Small Grant Awards. The regulations (Code of Federal Regulations, Title 42, Part 52 and Title 45, Part 74) and policies that govern the research grant programs of the Public Health Service will prevail. The award of grants pursuant to this request for grant applications is contingent upon receipt of appropriated funds for this purpose.

IV. METHOD AND CRITERIA OF REVIEW

- A. Assignment of Applications: Applications will be received by the Division of Research Grants (DRG), NIH, and referred by the DRG to an appropriate study section for scientific review. Study section assignment will be governed by considerations specified in the DRG Referral Guidelines.
- B. Review Procedures: Applications in response to this announcement will be reviewed on a nationwide basis in competition with other applications received in the same review cycle, and in accord with the usual National Institutes of Health (NIH) peer review procedures. They will first be reviewed for scientific and technical merit by a review group composed mostly of non-Federal scientific consultants (study section). Following study section review, applications will be evaluated by NIA's Advisory Council with respect to the adequacy of the technical merit review and the program relevance of the research proposed. The review criteria customarily employed by the National Institutes of Health for regular research grant applications will prevail.
- C. Deadlines: Applications will be accepted in accordance with the usual receipt dates for new applications (i.e., February 1/March 1, June 1/July 1, October 1/November 1).

V. METHOD OF APPLYING

Applications should be submitted on form PHS 398 which is available in the business or grants and contracts office at most academic and research institutions, or on form PHS 5161 for state and local governments. The phrase **"PREPARED IN RESPONSE TO NIA EXERCISE PHYSIOLOGY AND AGING PROGRAM ANNOUNCEMENT"** should be typed into item 2 of the first page of the application.

The original and six copies of the application should be sent or delivered to:

Application Receipt Office
Division of Research Grants
National Institutes of Health
Westwood Building - Room 240
Bethesda, Maryland 20205

VI. INQUIRIES AND CORRESPONDENCE

Inquiries about this program announcement and correspondence prior to submission of a proposal are encouraged and should be directed to:

William A. Kachadorian, Ph.D.
Chief, Exercise Physiology Section
Physiology of Aging Branch
Biomedical Research and Clinical Medicine Program
National Institute on Aging
Building 31 - Room 5C-27
Bethesda, Maryland 20205

Telephone: (301) 496-9350

ANNOUNCEMENT

BIOMEDICAL RESEARCH FELLOWSHIP OPPORTUNITIES ABROAD

P.T. 22, 48; K.W. 0720005

JOHN E. FOGARTY INTERNATIONAL CENTER FOR ADVANCED STUDY IN THE HEALTH SCIENCES

The John E. Fogarty International Center for Advanced Study in the Health Sciences (FIC) of the National Institutes of Health (NIH) announces the availability of postdoctoral fellowships to U.S. health scientists who wish to conduct collaborative research abroad. The purpose of these fellowships biomedical, behavioral and health sciences.

Programs Available to U.S. Citizens or Permanent U.S. Residents:

ACADEMY OF FINLAND POSTDOCTORAL RESEARCH FELLOWSHIPS

ALEXANDER VON HUMBOLDT FOUNDATION POSTDOCTORAL RESEARCH FELLOWSHIPS

FRENCH NATIONAL INSTITUTE OF HEALTH AND MEDICAL RESEARCH POSTDOCTORAL FELLOWSHIPS

NIH-FRENCH NATIONAL CENTER FOR SCIENTIFIC RESEARCH EXCHANGE PROGRAM

IRISH MEDICAL RESEARCH COUNCIL POSTDOCTORAL FELLOWSHIP

ISRAELI MINISTRY OF HEALTH POSTDOCTORAL RESEARCH FELLOWSHIPS

NORWEGIAN RESEARCH COUNCIL FOR SCIENCE AND THE HUMANITIES POSTDOCTORAL FELLOWSHIPS

SWEDISH MEDICAL RESEARCH COUNCIL FELLOWSHIPS

SWISS NATIONAL SCIENCE FOUNDATION POSTDOCTORAL FELLOWSHIPS

VISITING SCIENTISTS PROGRAM OF THE NATIONAL SCIENCE COUNCIL, TAIWAN

The eligibility requirements of each program vary and this information is provided in each program's brochure which is available upon request. However, at a minimum, each candidate must have an earned doctoral degree in one of the behavioral, biomedical or health sciences and some postdoctoral experience.

The NIH is responsible for the scientific review of all applications except those that are submitted to the Alexander Von Humboldt Foundation and the National Science Council, Taiwan.

Applications to the Alexander von Humboldt Foundation and the Visiting Scientists Program for the National Science Council, Taiwan are available and are accepted

throughout the year. All other applications must be submitted by June 1, 1985. **Please note that this is a change in the receipt date for applications to these fellowship programs.** Applications to these two programs are available and are accepted throughout the year.

For those fellowship programs with a June 1 receipt date, application kits will be available from January 15, 1985 to May 15, 1985. The organization that provides financial support for each of the programs selects candidates for participation. While the maximum period of support for all programs is one year, the minimum period of support varies with each program.

All correspondence should refer clearly to the specific program of interest. For further information and fellowship application kits, please send a self-addressed label with your request to:

International Research and Awards Branch
Fogarty International Center
Building 38A - Room 615
National Institutes of Health
Bethesda, Maryland 20205

ANNOUNCEMENT

SENIOR INTERNATIONAL FELLOWSHIPS

P.T. 22, 48; K.W. 0720005, 0404000

JOHN E. FOGARTY INTERNATIONAL CENTER FOR ADVANCED STUDY IN THE HEALTH SCIENCES

The John E. Fogarty International Center for Advanced Study in the Health Sciences (FIC) announces the availability of senior postdoctoral fellowships to outstanding U.S. health scientists who wish to conduct collaborative research abroad. The purpose of these fellowships is to enhance the exchange of ideas and information in the biomedical, behavioral and health sciences. The types of activity that are supported by this program include collaboration in health studies, basic or clinical research, and the familiarization with or utilization of special techniques and equipment not otherwise available to the applicant. This program does not provide support for brief observational visits, attendance at scientific meetings, attendance in formal training courses, independent research projects, or full-time clinical, technical or teaching services.

I. ELIGIBILITY REQUIREMENTS

Applicants must meet the following requirements.

- o Be a U.S. citizen or permanent U.S. resident.
- o Hold a doctoral degree in one of the biomedical, behavioral or
- o Have five years or more postdoctoral experience.
- o Have professional experience in one of the health, biomedical or behavioral sciences for at least two of the last four years.
- o Hold a full-time appointment on the staff of a U.S. not-for-profit institution
- o Be nominated by the dean or appropriate U.S. institutional official.
- o Be invited by a not-for-profit foreign institution.
- o Not be a previous recipient of a Senior International Fellowship.
- o Not be employed by the federal government.

II. APPLICATION AND SELECTION

There are now 3 receipt dates for Senior International Fellowship applications -- June 1, October 1 and February 1. **PLEASE NOTE THAT THIS IS A CHANGE IN THE RECEIPT DATE FOR THESE APPLICATIONS.** All applications are reviewed for scientific merit by the National Institutes of Health. Fellowship awards are

made for periods of three to twelve months. A fellowship must be activated within one year after receiving the Notice of Award and the starting date of the fellowship is set by mutual agreement between the fellow and the collaborator at the foreign host institution. Prospective applicants for the Senior International Fellowship Program may obtain information brochures from FIC. Fellowship applications are available from the FIC and may be requested only by the dean or equivalent institutional official. Information and fellowship applications are available from:

Senior International Fellowship Program
International Research and Awards Branch
Fogarty International Center
Building 38A - Rm 615
National Institutes of Health
Bethesda, Maryland 20205

For an expeditious reply, please send a self-addressed label with your request to the above address.

KEYWORD THESAURUS

The complete Keyword Thesaurus (Revised October 1984), a 44-page publication listing terms and codes to identify areas of interest for research and other types of sponsored programs, may be ordered from the National Technical Information Service. One of the goals of the Keyword Thesaurus project is to expand the number of agencies that will participate in coding their announcements of sponsored activities in order to facilitate distribution of announcements from many agencies to faculty and staff members who have interests in the specific areas listed. For those wishing to order, the price of a paper edition is \$10.00; and the price for the microfiche edition is \$4.50. NTIS Order Number is PB85-136893.

National Technical Information Service
5285 Port Royal Road
Springfield, Virginia 22161

As indicated in the January 4, 1985 issue of the Guide a listing of the codes and terms sorted in numerical order is presented with this issue. This may serve as a convenient look-up table for the NIH-relevant terms coded in each announcement.

A corrected copy of the January 4th listing of Keyword Thesaurus terms organized by 21 major groupings for use with the NIH Guide for Grants and Contracts may be obtained by writing to:

Dr. John C. James
Asst. Dir. for Special Projects, DRG
Westwood Building - Room 457
National Institutes of Health
Bethesda, Maryland 20205

0700000 HEALTH AND SAFETY/MEDICAL SCIENCES/BIOMEDICAL

0201011	Animal Care	0417000	Sociology
0201013	Animal Diseases/Pathology	0500000	Education
0201016	Animal Genetics/Breeding	0502000	Educational/Instructional Programs
0201018	Animal Physiology/Morphology	0502002	Alcohol Education
0201058	Veterinary Medicine	0502009	Dental Health Education
0202001	Food Additives	0502011	Drug Education
0202002	Food Analysis	0502017	Health and Safety Education
0401001	Anthropology, Cultural/Social	0502024	Medical Education
0403001	Adolescents	0502027	Nursing Education
0403004	Community/Outreach Programs	0502028	Nutrition Education
0403017	Volunteers	0502045	Pharmacy Education
0403019	Adults	0503007	Computer-Assisted Instruction
0403020	Infants	0503016	Instructional Materials and Practices
0404000	Behavioral/Social Studies	0503018	Learning Motivation
0404001	Addiction	0507002	Emotionally Disturbed, Educ.
0404003	Alcohol/Alcoholism	0507004	Handicapped, Education
0404004	Child Psychology/Development	0507005	Learning Disabled, Education
0404007	Death and Dying	0607010	Microelectronics
0404009	Drugs/Drug Abuse	0607023	Telemetry
0404019	Smoking Behavior	0607024	Ultrasonic Technology
0404020	Suicide	0705000	ANATOMICAL SYSTEMS/SITES
0404021	Surveys and Survey Research	0705005	Bone Marrow
0404023	Violent Behavior	0705010	Brain
0408006	Health Care Economics	0705015	Cardiovascular System
0410000	Linguistics/Philology	0705020	Connective Tissue
0410001	Language Acquisition/Development	0705025	Digestive System
0411005	Risk Factors/Analysis	0705030	Endocrine System
0413000	Population Studies	0705035	Fetus
0413001	Demography	0705040	Immune System
0413002	Human Reproduction/Fertility	0705045	Lymphatic System
0413003	Migration	0705050	Musculoskeletal System
0413004	Population Biology	0705055	Nervous System
0413005	Population Control	0705060	Placenta
0414000	Psychology	0705065	Respiratory System
0414004	Clinical Psychology	0705070	Sensory System
0414005	Cognitive Development/Processes	0705075	Urogenital System
0414006	Developmental Psychology	0706000	BIOMEDICAL ENGINEERING
0414007	Educational Psychology	0706010	Bioelectric Phenomena
0414011	Physiological Psychology	0706020	Clinical Engineering
0414012	Psychobiology	0706030	Medical/Diagnostic Imaging
0414013	Psychometrics	0706040	Physiological Controls and Systems
0414014	Social Psychology	0710000	DISCIPLINES/FIELDS
0414015	Behaviorism/Experimental Psychology	0710005	Adolescent Health
0414020	Psychodynamics	0710010	Aging/Gerontology
0415000	Therapy/Rehabilitation	0710015	Bioengineering

0710020	Biomechanics	0715115	Hypertension
0710030	Biomedical Research, Multidisciplinary	0715120	Immune System Disorders
0710035	Biotechnology	0715125	Infectious Diseases/Agents
0710040	Chemistry, Clinical	0715130	Mental Retardation
0710045	Drug Metabolism	0715135	Metabolic Diseases
0710050	Electrophysiology	0715140	Neuromuscular Disorders
0710055	Enzymology	0715145	Obesity
0710060	Immunochemistry	0715150	Pain
0710065	Immunogenetics	0715155	Perinatal Disorders
0710070	Immunology	0715160	Pregnancy Disorders
0710075	Immunopathology	0715165	Pulmonary Diseases
0710080	Medicinal Chemistry	0715170	Rheumatic Diseases
0710085	Neurophysiology	0715175	Safety
0710090	Nuclear Medicine	0715180	Senile Dementia
0710095	Nutrition/Dietetics	0715185	Skin Diseases
0710100	Pharmacology	0715190	Stillbirth
0710105	Psychopathology	0715195	Stress
0710110	Reproductive Endocrinology	0715200	Stroke
0710115	Reproductive Physiology	0715205	Sudden Infant Death Syndrome
0710120	Speech Pathology	0715210	Trauma
0710125	Transplantation Immunology	0715215	Tumor Immunology
0710130	Pharmacy	0715220	Venereal Diseases
0715000	DISEASES/MEDICAL PROBLEMS	0720000	EDUCATION/INSTRUCTION
0715005	Accidents	0720005	Biomedical Research Training
0715010	Arthritis	0725000	ENVIRONMENT
0715015	Autoimmunity	0725005	Environmental Health
0715015	Health, Radiation Effects	0725010	Health and Safety Standards
0715020	Behavioral Medicine	0725020	Occupational Health & Safety
0715025	Biofeedback	0725025	Poison Control
0715030	Birth/Congenital Defects	0730000	HEALTH CARE
0715035	Cancer/Carcinogenesis	0730005	Child/Maternal Health
0715040	Cardiovascular Diseases	0730010	Family Health/Planning/Safety
0715045	Communicable Diseases	0730015	Folk Medicine
0715050	Communicative Disorders, Hearing	0730020	Health Care Administration
0715055	Communicative Disorders, Speech	0730025	Health Facilities Studies
0715060	Convulsive Disorders	0730030	Health Insurance
0715070	Death and Dying, Health and Physical Needs	0730035	Health Maintenance Organizations
0715075	Diabetes	0730040	Health Manpower/Professions
0715080	Diabetic Retinopathy	0730045	Health Records
0715085	Digestive Diseases and Disorders	0730050	Health Services Delivery
0715090	Dyslexia	0730055	Hospices
0715095	Emotional/Mental Health	0730060	Nursing Homes
0715100	Eye Diseases	0730065	Patient Care and Education
0715105	Hyperplasia	0730070	Public Health
0715110	Hypersensitivity	0735000	INSTRUMENTS/INSTRUMENTATION DEVICES
		0735005	Automated Clinical Analysis
		0735015	Instrumentation, Medical
		0740000	INTERVENTION, AGENTS FOR

0740005	Antibiotics	0760010	Endorphins
0740010	Anticonvulsants	0760015	Gene Products
0740015	Biological Response Modifiers	0760020	Growth Factors
0740020	Chemotherapeutic Agents	0760025	Hormones
0740025	Pharmaceuticals	0760030	Hybridomas
0740030	Prosthetic Device, Hearing	0760035	Inhibitors
0740035	Prosthetic Device, Heart	0760040	Lipoproteins
0740040	Prosthetic Device, Kidney	0760045	Monoclonal Antibodies
0740045	Prosthetic Device, Limbs	0760050	Neurotransmitters
0740050	Prosthetic Device, Neural	0760055	Opiates
0740055	Prosthetic Device, Pancreas	0760060	Peptides
0740060	Prosthetic Device, Speech	0760065	Prostaglandins
0740065	Prosthetic Device, Vision	0760070	Proteins and Macromolecules
0740070	Prosthetic Devices (General)	0760075	Receptors
0740075	Vaccine	0760080	Recombinant DNA
0745000	INTERVENTION, TYPES OF	0765000	NATURAL PROCESSES
0745005	Chemotherapy	0765005	Bioenergetics
0745010	Dental Health and Hygiene	0765010	Biosynthesis
0745015	Detoxification	0765015	Gene Regulation
0745020	Diagnosis, Medical	0765020	Metabolism
0745025	Dialysis	0765025	Metabolism, Lipid
0745030	Exercise	0765030	Metabolism, Mineral
0745035	Health Promotion	0765035	Pathophysiology
0745040	Immunosuppression	0770000	PATIENT/VOLUNTEER
0745045	Immunotherapy	0770005	Children (Patients)
0745050	Preventive Dentistry	0770010	Handicapped/Disabled
0745055	Preventive Medicine	0770015	Hospitalized Patient
0745060	Psychotherapy	0770020	Outpatient
0745065	Transplantation of Organs	0775000	PHYSIOLOGICAL/DEVELOPMENT PROCESS
0750000	MATERIALS/PRODUCTS	0775005	Hearing
0750005	Biomaterials	0775010	Lactation
0750010	Blood/Blood Products/ Transfusion	0775015	Physical Growth/Retardation
0750015	Breast Milk	0775020	Pregnancy
0750020	Contraceptives	0775025	Prenatal Factors
0750025	Natural Products	0775030	Teratology
0755000	METHODOLOGIES/PROCEDURES	0780000	RESEARCH RESOURCES
0755005	Amniocentesis	0780005	Biologicals Resources
0755010	Bioassay	0780010	Biomedical Research Resources, Other
0755015	Clinical Trial	0780015	Cell Lines
0755020	Disease Model	0780020	Tissue Culture
0755025	Drug Design	0783005	Human Subjects Policy
0755030	Etiology	0783010	Ethics, Medical
0755035	Gene Cloning	0783015	Health Planning/Policy
0755040	Genetic Manipulation	0785000	SPECIALTIES OF MEDICAL AND ALLIED FIELDS
0755045	Nucleic Acid Sequencing	0785005	Aerospace Biomedicine
0755050	Preservation of Organs/Tissue	0785010	Allergy
0755055	Abortion (Induced)	0785015	Anesthesiology
0760000	MOLECULAR/CELLULAR ENTITIES		
0760005	Collagen		

0785020	Audiology	0901026	Management Sciences
0785025	Cardiology	1002000	Biological Sciences
0785030	Chiropractic	1002001	Anatomy
0785035	Clinical Medicine, General	1002002	Animal Breeding and Facilities
0785040	Dentistry	1002003	Bacteriology
0785045	Dermatology	1002004	Biology, Cellular
0785050	Endocrinology	1002006	Biology, Developmental
0785055	Epidemiology	1002008	Biology, Molecular
0785060	Gastroenterology	1002009	Biology, Radiation
0785065	Health, Allied Fields	1002012	Biometry
0785070	Hematology	1002013	Botany
0785075	Medical Genetics	1002015	Cytology
0785080	Medicine, Family Practice	1002016	Ecology
0785085	Medicine, Internal	1002017	Embryology
0785090	Midwifery	1002019	Genetics
0785095	Nephrology	1002021	Histology
0785100	Neuroanatomy	1002024	Instrumentation, Biological
0785105	Neuroendocrinology	1002027	Microbiology
0785110	Neurology	1002028	Mutagenics
0785115	Neuropharmacology	1002029	Mycology
0785120	Neurosurgery	1002030	Neuroscience
0785125	Nurse Practitioner	1002032	Parasitology
0785130	Nursing	1002034	Physiological Processes
0785135	Obstetrics-Gynecology	1002040	Plant Sciences
0785140	Oncology	1002041	Plant Virology
0785145	Ophthalmology	1002042	Reproduction
0785150	Optometry	1002044	Vertebrate Physiology
0785155	Orthopedics	1002045	Viral Studies (Virology)
0785160	Otorhinolaryngology	1002046	Vision
0785165	Pathology	1002047	Zoology
0785170	Pediatrics	1002048	Biodegradation
0785175	Periodontics	1002049	Cloning of Cells
0785180	Physical Medicine and Rehabilitation	1002050	Cloning of Organisms
0785185	Psychiatry	1002052	Development, Animal
0785190	Radiology	1002053	Development, Human
0785195	Rheumatology	1002058	Molecular Genetics
0785200	Serology	1002059	Morphogenesis
0785205	Sports Medicine	1003001	Atomic & Molecular Structure
0785210	Surgery	1003002	Biochemistry
0785215	Tropical Medicine	1003003	Chemical Dynamics
0785220	Urology	1003006	Chemical Synthesis
0790000	STRUCTURE/FUNCTION	1003008	Chemistry, Analytical
0790005	Membrane Structure/Function	1003012	Chemistry, Organic
0790010	Nucleic Acid Structure/ Function	1003014	Chemistry, Physical
0790015	Ultrastructure	1003015	Biochemistry, Carbohydrates
0795000	TECHNOLOGY ASSESSMENT/ TRANSFER/OUTREACH	1003016	Biochemistry, Lipids
0795005	Therapy Evaluation	1003017	Biochemistry, Nucleic Acid
		1003018	Biochemistry, Proteins
		1003019	Catalysis

1003022	Surface Chemistry	1009008	Materials, Polymeric
1004000	Computer Science	1009013	Polymer Science
1004002	Computer-Assisted Design	1010013	Statistics
1004004	Computer Graphics	1013004	Biophysics
1004005	Computer Modeling	1013017	Optics
1004008	Computer Storage & Retrieval	1013020	Chemical Physics
1004015	Artificial Intelligence	1013026	Radiation Physics
1004017	Information Science/Systems	1013034	Spectroscopy
1004020	Library Automation	1013038	Electron Microscopy
1004022	Pattern Recognition	1013039	Microscopy
1005020	Remote Sensing	1014001	Instrumentation, Scientific
1007001	Biology, Environmental	1014002	SCIENCE PLANNING/POLICY
1007002	Chemistry, Environmental	1014003	Animal Research Policy
1007003	Environmental Effects	1016002	Technology Assessment
1007005	Pollution, Air	1016003	Technology Planning/Policy
1007008	Pollution, Water	1016004	Technology Transfer
1007009	Toxicology	1103002	Research Libraries
1009007	Materials, Composite		