NIH GUIDE

For Grants and Contracts

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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. 17, No. 1
January 8, 1988

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DATED ANNOUNCEMENTS (RFPs and RFAs AVAILABLE)

ONGOING PROGRAM ANNOUNCEMENTS

DATED ANNOUNCEMENTS (RFPs and RFAs AVAILABLE)

CANCER INFORMATION DISSEMINATION AND ANALYSIS CENTER (CIDAC) CANCER DIAGNOSIS AND THERAPY

RFP AVAILABLE: NCI-CO-74109-10

P.T. 16; K.W. 1004017, 0715035, 0745020, 0415000, 1004008

National Cancer Institute

The National Cancer Institute is seeking organizations with scientific and technical capabilities to assume the operation of a Cancer Information Dissemination and Analysis Center (CIDAC) for the International Cancer Research Data Bank (ICRDBB) Branch, International Cancer Information Center. One contract will be awarded in the subject area of cancer diagnosis and therapy. Major activities include:

Assuming regular monthly production of over 21 series of "CANCERGRAMS", monthly current awareness bulletins containing 30 to 100 abstracts of recently published cancer research. For each CANCERGRAM topic, a CIDAC staff member ("subject specialist") screens monthly abstracts retrieved from computerized searching of an ICRDB database and prepares a package of some 50 to 100 abstracts for review by a consultant (identified by the CIDAC) who is currently involved in research pertinent to the CANCERGRAM topic area and who need not be an employee of the organization.

Producing annually 5 different "ONCOLOGY OVERVIEWs", retrospective compilations of 150 to 500 selected abstracts on high interest cancer research topics. The publications are developed by the subject specialists in consultation with researchers (identified by the CIDAC) who are recognized as experts in the subject area of each ONCOLOGY OVERVIEW.

Responding rapidly to request for information in specific cancer research subject areas. Subject specialists must be able to interact knowledgeably and professionally with scientists requesting information, and formulate and use computer search strategies for retrieving the needed information from ICRDB databases.

The organization must have previous experience in analysis and processing of cancer research information or similar biomedical information as well as involvement with cancer research (preferably in house or via a teaming arrangement). The Project Director must have a Ph.D. or M.D. and one or more research publications in a biomedical subject directly relevant to cancer research areas covered by the CIDAC. Consultants and Outside Reviewers must have a Ph.D. or M.D. degree and one or more research publications in a biomedical subject area directly relevant to the specific CANCERGRAM which they are to review.

Collectively, they must cover all CANCERGRAM topics within the CIDAC's purview and should be located in sufficiently close proximity to the CIDAC office or provision must be made for overnight courier delivery to provide rapid turn around in their review of CANCERGRAM materials.

RFP NCI-CO-74109-10 will be available on or about January 12, 1988. Proposals will be due thirty days thereafter.

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

Patricia Rainey, Contracting Officer
Prevention and Control Contracts Section
Research Contracts Branch
National Cancer Institute
Blair Building, Room 314
Bethesda, Maryland 20892
Telephone: (301) 427-8877

RADIOTHERAPY TREATMENT PLANNING TOOLS

RFP AVAILABLE: NCI-CM-87241-23

P.T. 34; K.W. 0785190, 1004000, 0706030, 1004015

National Cancer Institute

The Radiation Research Program (RRP) of the Division of Cancer Treatment (DCT), National Cancer Institute, is seeking organizations to form a

Collaborative Working Group (CWG) to develop new computer based support systems that provide the radiotherapist and medical physicist in the field of radiation therapy treatment planning with new tools that will help to make three dimensional treatment planning a routine activity. A principal goal of the research is to produce clinically useful software tools that are transportable. It is expected that the research will make use of expert system technology, but is not limited to this type of software development.

The CWG, which will be made up of the research team from each of the successful contracting organizations, will be comprised of a multi-disciplinary group of physicists computer scientists and physicians. The CWG will meet at regular intervals to direct the research efforts of the group. The first year will be concerned with an assessment of existing software tools that can: 1) automatically and rapidly extract anatomical features from multiple computer tomography images; 2) transfer tumor outlines from other imaging modalities to CT scans; 3) assist the physician in the development of treatment volume outlines based on tumor contours; 4) make first-guess choices for an optimized treatment plan; 5) present alternative plans for radiotherapists using the full capabilities of three dimensional treatment planning system; and 6) provide the means for rapidly and interactively comparing digitally-produced images of a patient in a treatment position and a CT-based reconstruction for treatment position verification.

The development of these software tools will require a consensus among the CWG as to software documentation, data formats, hardware compatibility, and a general methodology for adapting the ideas and/or existing software to existing three-dimensional radiotherapy treatment planning systems. In the remaining years of these contracts, the individual organizations will test and evaluate the software in routine clinical settings and present the results to the CWG.

This synopis is not a request for proposal. This RFP will not be issued until a Delegation of Procurement Authority (DPA) clearance has been obtained for Automatic Data Processing. It is anticipated that RFP NCI-CM-87241-23 for the above described work will be available to interested prosperors on or about March 7, 1988, with a due date for receipt of proposals on or about May 27, 1988. Copies of the RFP may be obtained by sending a written request to:

Nancy M. Carrick, Contract Specialist
Research Contracts Branch, TCS
Blair Building, Room 225
National Cancer Institute
National Institutes of Health
Bethesda, Maryland 20892
Telephone: (301) 427-8737

CORONARY HEART DISEASE AND STROKE IN PEOPLE AGED 65 TO 84 YEARS - CENTRAL BLOOD ANALYSIS LABORATORY

RFP AVAILABLE: RFP NIH-NHLBI-HC-88-04

P.T. 34; K.W. 0750010, 0745020, 0755010

National Heart, Lung, and Blood Institute

The Epidemiology and Biometry Research Program, DECA, NHLBI, seeks a Central Blood Analysis Laboratory for a project in which three field centers will recruit, examine, and follow a total of 4000 men and women (1334 in each center) aged 65 to 84 years at the baseline examination in a prospective study of coronary heart diseases and stroke. Over a 5 1/2 year performance period the Central Blood Analysis Laboratory will develop a protocol for collection of blood samples at the three field centers; will perform precise measures of lipids, hemostasis factors, insulin, glucose, etc.; will provide quality control of blood collection at the field centers and of measurements in the blood laboratory itself; and will participate in analysis and publication.

It is noted that this requirement was announced previously as RFP NHLBI HC-87-05. The previous RFP has been cancelled because no technically acceptable proposals were received.

RFP NHLBI-HC-88-04 for the Central Blood Analysis Laboratory will be available on or about January 11, 1988, with proposals due approximately March 10, 1988. One award is anticipated. Your written request should include three mailing labels, self-addressed, and must cite RFP No. NHLBI-HC-88-04.

Requests for copies of the RFP should be sent to:

Betty Nordan
Contracting Officer for Epidemiology and
Biometry Research Program
ECA Contracts Section
National Heart, Lung, & Blood Institute
Federal Bldg., Room 3C16
Bethesda, Maryland 20892

BIOCHEMICAL BASES OF NUTRIENT FUNCTION

RFA AVAILABLE: 88-HD/DK-06

P.T. 34; K.W. 0710095, 1003002, 0760020, 0760025, 0765030, 0760080

National Institute of Child Health and Human Development
National Institute of Diabetes and Digestive and Kidney Diseases

Application Receipt Date: April 1, 1988

The Endocrinology, Nutrition and Growth (ENG) Branch of the Center for Research for Mothers and Children of the National Institute of Child Health and Human Development (NICHD) and the Nutritional Sciences Branch of the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) invite research grant applications for studies on the biochemical bases of nutrient function. By using this request for applications (RFA), the Institutes seek to stimulate investigators' interest in an area of research important to the Institutes' missions.

BACKGROUND

Studies are sought on the functions of trace elements in metabolism during development, as well as mechanistic studies of the effects of excesses, deficiencies, and interactions of nutrients on neurotransmission, drug metabolism, hormone synthesis and secretion, and teratogenesis. Of special interest are developmental studies of nutrient-genomic interactions, studies of the genetic and biochemical bases for states of increased nutrient dependency, and studies of the mechanisms by which growth factors modulate nutritional requirements during development.

This RFA also solicits studies of nutrient transport systems, nutrient-receptor interactions, and the roles played by nutrient-receptor complexes in cellular metabolism and gene expression. These may include isolation and purification of carrier and receptor proteins, with relevant structural studies, as well as recombinant DNA studies of the genes that code for these proteins.

Stable isotope studies of nutrient metabolic pathways are included, especially during periods of unusual nutritional demand, such as rapid growth, pregnancy, and adolescence. Long-term follow-up studies of the effect of rational nutrient therapy on genetic disorders of nutrient metabolism are encouraged.

OBJECTIVES AND SCOPE

This RFA seeks to stimulate studies which would lead to an increased understanding of nutrient function during development at the molecular and cellular levels, provide a basis for rational therapies of inherited or environmentally-induced derangements of metabolism, and evaluate the long-term effects of such therapies.

MECHANISMS OF SUPPORT

Support for this program will be through the traditional research grant. Policies that govern grant-in-aid award programs of the Public Health Service will prevail.

The support of grants pursuant to this RFA is contingent upon ultimate receipt of appropriated funds for this purpose. The number of awards will be influenced by the amount of funds available to the Institutes, by the overall merit of proposals, and by their relevance to program goals. It is anticipated that five meritorious applications will be funded under this program.

TIMETABLE

Application receipt date	April 1, 1988
Initial review date	June 1988

Review by Advisory Council September 1988

Anticipated award date December 1988

INQUIRIES

Ephraim Y. Levin, M.D.
Medical Officer
Endocrinology, Nutrition and Growth Branch
Center for Research for Mothers and Children
National Institute of Child Health and Human Development
National Institutes of Health
Room 7C-17, Landow Building
Bethesda, Maryland 20892
Telephone: (301) 496-5593

OR

Van S. Hubbard, M.D., Ph.D.
Director, Nutrient Metabolism; Obesity, Eating
Disorders and Energy Regulation Programs
National Institute of Diabetes and Digestive
and Kidney Diseases
National Institutes of Health
Room 3A18B, Westwood Building
5533 Westbard Avenue
Bethesda, Maryland 20892
Telephone: (301) 496-7823

The RFA label (found in the 9/86 revision of application form PHS 398) 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 of your application such that it will not reach the review committee in time for review.

ACADEMIC RESEARCH ENHANCEMENT AWARD

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

National Institutes of Health

Application Receipt Date: June 22, 1988

The National Institutes of Health (NIH) is making a special effort to stimulate research in educational institutions which provide the baccalaureate training for a significant number of our nation's research scientists but which historically have not been major recipients of NIH support. Since Fiscal Year (FY) 1985 Congressional appropriations for the NIH have included funds for this initiative, which NIH has implemented through the Academic Research Enhancement Award (AREA) Program. In FY 85, the NIH made 75 awards, totalling $5 million. In FY 86, 146 such grants were awarded, amounting to $9.57 million. In FY 87, a total of 152 AREA grants were awarded from the Congressional appropriation of $10 million.

This award is designed to enhance the research environment of educational institutions that have not been traditional recipients of NIH research funds. The AREA funds are intended to support new research projects or expand ongoing research activities proposed by faculty members of these institutions in areas related to the health sciences. Applications for FY 1988 AREA grants are currently undergoing review for scientific merit. Since it is anticipated that additional funds will be available next year, the NIH is inviting grant applications for the FY 1989 competition for AREA grants.

Eligibility requirements of the AREA Program include the following:

Applicant Institutions

- All domestic institutions offering baccalaureate or advanced degrees in the sciences related to health are eligible, except those that have received an NIH Biomedical Research Support Grant (BRSG) of $20,000 or more per year for four or more years during the period from FY 1982 through FY 1988.

- Health professional schools (e.g., schools of medicine, dentistry, nursing osteopathy, pharmacy, veterinary medicine, public health, allied health and optometry) as well as organizationally discrete campuses of a university system are eligible if they meet the above criterion.

- Multiple applications proposing different research projects may be submitted by an applicant institution.

Applicant Principal Investigators

- Must not have active research grant support (including an AREA) from either NIH or the Alcohol, Drug Abuse and Mental Health Administration (ADAMHA) at the applicant institution at the time of award of an AREA grant.
- May not submit a regular NIH or ADAMHA research grant application for essentially the same project as a pending AREA application.
- Are expected to conduct the majority of their research at their own institution, although limited access to special facilities or equipment at another institution is permitted.
- May not be awarded more than one AREA grant at a time nor be awarded a second AREA grant to continue the research initiated under the first AREA grant.

Those in doubt about eligibility should consult their institution's Office of Sponsored Research, or the Director, Special Programs and Initiatives (Building 31, Room 1B54, Bethesda, Maryland 20892, 301/496-1968).

Funding decisions will be based on the proposed research project's scientific merit and relevance to NIH programs, and the institution's contribution to the undergraduate preparation of doctoral-level health professionals. Among projects of essentially equivalent scientific merit and program relevance, preference will be given to those submited by institutions that have granted baccalaureate degrees to 25 or more individuals who, during the period 1977-1987, obtained academic or professional doctoral degrees in the health related sciences.

AREAs are awarded on a competitive basis. Applicants may request support for up to a total of $75,000 in direct costs (plus applicable indirect costs) for a period not to exceed 36 months. Although this award is non-renewable it will enable qualified individual scientists within the eligible institutions to receive support for feasibility studies, pilot studies and other small-scale research projects preparatory to seeking more substantial funding from the regular NIH research grant programs.

Applications for this award will be accepted under the regular application submission procedures of the Division of Research Grants (DRG) of NIH. Grant applications must be prepared and submitted on Form PHS 398 (Rev. 9/86) Grant Application. An abbreviated format and simplified instructions will be provided for use in preparing these applications. The receipt date is June 22, 1988.

Those individuals and institutions meeting eligibility requirements and wishing to receive further information and/or application materials should write to:

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

ONGOING PROGRAM ANNOUNCEMENTS

RESEARCH GRANTS ON THE SURGICAL MANAGEMENT OF EPILEPSY

P.T. 34; K.W. 0715060, 0785210

National Institute of Neurological and Communicative Disorders and Stroke

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

INTRODUCTION

The Epilepsy Branch, Division of Convulsive, Developmental, and Neuromuscular Disorders, National Institute of Neurological and Communicative Disorders and Stroke (NINCDS) encourages the submission of research project grant

applications (R01) concerning the surgical management of epilepsy.

BACKGROUND

Intractable epilepsy remains a significant health problem despite the availability of several efficacious medications and of antiepileptic blood level monitoring to increase therapy effectiveness. Partial epilepsy affects about 0.5 percent of the American population (about 800,000 persons). An estimated 350,000 patients in the United States with partial seizures are intractable to medical therapy. Over 100,000 of these patients in the United States are currently considered candidates for management by surgical therapy.

Complex partial seizures may arise from any portion of the limbic system (occipital, frontal, or temporal lobes). In reported series, 60-90 percent excellent control of seizures has resulted from patients carefully selected for resection of a temporal lobe epileptic focus. Frontal lobe resections have a lesser success rate. Failures are attributed to inadequate focus localization (focus beyond the extent of resection or the presence of other unappreciated foci).

Extensive presurgical investigations are required to localize the seizure focus. Intensive monitoring of the EEG and videotaping of many of the patient's typical seizures usually provides the first evidence of a potential surgical candidate. Other clinical and experimental studies are employed to define underlying structural abnormalities (angiography, computerized tomography, magnetic resonance imaging), altered metabolism (positron emission tomography), or impaired function (evoked potentials, neuropsychological evaluation).

The most reliable techniques for defining the seizure focus involve recordings of the patient's typical seizures using depth electrodes or subdural and epidural electrode arrays. The results obtained from these recordings have been shown to alter the subsequent course of patient management by epilepsy surgery in about one-third of potential candidates either by selecting some patients for surgery where a single resectable focus could not otherwise be defined, or by detecting unsuspected multiple foci not amenable to surgery. Extratemporal resections (including the most common, frontal gyrectomy) are less often performed than temporal lobectomy because the rate of success is lower. Current methods of localization are insufficient for precise localization of the epileptic focus within structures as large as the frontal lobe. The resulting resection is also limited by avoidance of the motor strip and areas of localized cognitive functions (e.g. speech). The major morbidity following frontal gyrectomy for epilepsy involves changes in cognitive function and personality. The occurrence of these adverse effects is related to the functional integrity of the resected tissue and of the remaining frontal tissue, particularly contralaterally. At present, there is no reliable test for frontal lobe function analogous to the amytal test used in assessing memory and speech function prior to temporal lobectomy. Improved localization of extratemporal seizure foci may allow more limited resection with minimal postoperative deficit.

Recently, corpus callosotomy has been used in some centers as an experimental therapy for certain patients with severe intractable generalized seizures. Patients with Lennox-Gastaut syndrome, infantile hemiplegia, progressive epileptic encephalopathy, and frontal lobe epilepsy often have poorly localized intractable seizures, including dangerous sudden drop attacks and generalized tonic-clonic seizures. Formal criteria for performance of this procedure have not yet been established. Corpus callosotomy has not been used for the control of focal seizures, which theoretically would not be helped by the procedure. However, the procedure has been used for the therapy of selected patients with multiple seizure types. In some of these patients, the focal seizures decrease postoperatively, whereas in other patients they increase or become more severe. The mechanisms behind these results are not understood.

There are no large series for the evaluation of stereotaxic procedures. Some reports support a stereotaxic lesion of the H field of Forel for the control of intractable generalized tonic-clonic seizures.

Total hemispherectomy in children as a treatment for refractory epilepsy attributed to severe unilateral hemisphere dysfunction has been associated with unacceptably high morbidity and mortality. However, new procedures are being developed for partial hemispherectomies which preserve some viable portion (usually frontal or occipital lobe) of the resected hemisphere.

Surgical treatment in childhood for medically intractable seizures may allow more normal neuropsychological and social development. However, there is need for research to define the natural history of seizures in children and the effect of surgical procedures on the developing brain. The criteria for

selection of surgical candidates require modifications for younger children.

An international conference for epilepsy surgery held in February 1986 focused on surgical treatment of epilepsy as an investigative resource. The conference highlighted the vast opportunities afforded by epilepsy surgery centers to perform on the human brain the kinds of direct studies that were previously limited to animals-- such as macro-and microelectrode recordings, and studies using stimulation and ablation techniques. The conference further highlighted the unique opportunity that exists for collaboration between basic and clinical neuroscientists to characterize the biochemistry, microanatomy, physiology and pharmacology of specific human brain regions by studying tissue samples resected at surgery. The need for prospective surgical therapy studies with well-defined entrance criteria and rigorously standardized outcome measures was also emphasized. This conference has resulted in two publications by Raven Press: Surgical Treatment of the Epilepsies (1986) and Fundamental Mechanisms of Human Brain Function (1987).

RESEARCH GOALS

The goal of this research program is to explore the use of various modalities of surgery for the treatment of different seizure types. The research scope of this program encompasses both animal and human studies, utilizing a variety of experimental approaches and methods.

Investigators are encouraged to (a) define specific criteria for selecting the use of alternative surgical procedures, (b) determine the optimal means of evaluating surgical candidates by localization of the seizure focus, (c) define the long-term improvement and/or adverse effects by appropriately designed, standardized, and validated follow-up measures, and (d) establish age-related indications for surgery in the pediatric age group to assure appropriate neurodevelopmental timing of the procedure for different types of epilepsy, and also establish age-appropriate presurgical evaluation, surgical procedures, and postsurgical follow-up. Collaborative clinical investigations to achieve an adequate and appropriate study population would be encouraged.

MECHANISM OF SUPPORT

Support for this program will be through the traditional investigator-initiated research project grant-in-aid.

This program is described in the Catalog of Federal Domestic

Assistance No. 13.853, Clinical Basis Research, NINCDS. Awards will be made under the authority of the Public Health Service Act, Title IV, 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. APPLICATION AND REVIEW PROCEDURES

Applications should be prepared on Form PHS 398 (revised 9/86) according to instructions contained in the application kit. Application kits are avilable from most institutional business offices or may be obtained from the Division of Research Grants at the address given below. Check "yes" in item two on the face sheet of the application and type "Grants Related to the Surgical Management of Epilepsy" in the space provided.

Applications should be responsive to the program announcement and the goals of NINCDS. They will be judged on scientific merit and program relevance in accordance with NIH policy and procedures involving peer review. An initial review will be made by an appropriate study section of the Division of Research Grants. A second level of review will be made by the National Advisory Neurological and Communicative Disorders and Stroke Council.

Deadlines for the receipt of applications are June 1, October 1, and February 1.

The original and six copies of the application should be mailed to the following address:

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

For further information, applicants may contact:

Philip H. Sheridan, M.D.
NINCDS, DCDND, EB
National Institutes of Health
Federal Building - Room 114
7550 Wisconsin Avenue
Bethesda, Maryland 20892
Telephone: (301) 496-1917

SPINAL CORD INJURY AND REPAIR

P.T. 34; K.W. 0705055, 0715005, 0715210

National Institute of Neurological and Communicative Disorders and Stroke

The Division of Stroke and Trauma of the National Institute of Neurological and Communicative Disorders and Stroke (NINCDS) encourages the submission of individual research grant and program project grant applications related to traumatic injury to the spinal cord.

BACKGROUND

Traumatic injury to the spinal cord tragically affects hundreds of thousands of victims in the United States. Each year approximately 10,000 such injuries occur, most commonly to persons under 30 years of age. The economic impact is enormous: long-term, specialized care for paralyzed patients is estimated at $2 billion annually. The personal cost to patients and their families is beyond calculation. Education, career, marriage, and independence are interruped and often never regained.

The spinal cord, as part of the central nervous system (CNS), coordinates movement and sensation for the entire body below the head. Specialized cell populations serve these functions. Large motor neurons extend long axons peripherally to innervate skeletal muscle. The extensive dendritic trees of these motoneurons receive information via descending tracts from the brain. The long fibers of dorsal root ganglion cells connect peripheral sensory receptors to small spinal interneurons, to motoneurons, and to brain centers. The great neuronal circuitry of the spinal cord is supported by the glia of the CNS. Radial glia enclose the cord like the rim and spokes of a wheel, defining compartments for the ascending and descending fiber tracts. Astrocytes contribute to the blood-spinal cord barrier. Myelination is by oligodendrocytes.

Traumatic injury disrupts each of these cell types and changes their physiology. Axons degenerate, neurons die, astrocytes proliferate, and radial glia enclose large cysts. Earlier studies of spinal cord injury presented a grim picture of delicate symmetry and intricate connections turned to chaos. More recent evidence offers a glimmer of understanding. It has been shown that axons in the spinal cord begin to regenerate, and glia begin to reorganize the injured area and clear away debris.

Enhancement of these beginnings of regeneration and reorganization may be possible. Several trophic factors are known to affect survival of neurons and extension of neurites. Likewise, naturally occuring substances may stimulate glia to divide or migrate. Components of the extracellular matrix can support the growth of axons. Methods to manipulate the neural environment exist, and have been shown effective in a variety of in vitro and in vivo models. Application of this growing knowledge and methodology to the study of spinal cord injury is necessary.

RESEARCH GOALS AND SCOPE

Whereas the ultimate goal of this research is an effective prevention or treatment for the paralysis that follows traumatic injury to the spinal cord, the NINCDS realizes that to achieve this goal a broad range of investigation is necessary, from basic studies of the functional neuroanatomy of the spinal cord to clinical trials of promising forms of treatment. Areas of research may include, but are not limited to, the following topics:

- studies correlating electrophysiology with neuroanatomical and (or) behavioral characteristics of spinal cord injury;
- pharmacological studies to test the usefulness of new drugs that affect ion channels or that modify adrenergic, opiate, hormonal, or peptidergic systems;
- development of new behavioral paradigms to test recovery of function;

- o implantation of tissue aimed at preventing functional deficits or restoring functions lost due to spinal injury;
- o use of naturally occurring factors that promote neuritic outgrowth, differentiation of glia or neurons, production of myelin, or formation of synapses;
- o development of models of injury to the spinal cord that provide clearly defined anatomical and functional deficits; and
- o evaluation of mechanical interventions to improve regrowth of fibers, prevent pathophysiological changes, or aid in functional recovery.

Applicants are encouraged to address any specific aspect of the several examples listed above or similar topics of importance. If appropriate interest, abilities, and facilities are available, applications for interdisciplinary studies are welcome. Such studies could include basic, applied, and clinical approaches, such as in the disciplines of neuroanatomy, neurophysiology, neurochemistry, neuropharmacology, and neurology.

MECHANISMS OF SUPPORT

The support mechanism for grants in this area will be the individual research grant (R01) and the program project grant (P01). Under these mechanisms, the principal investigator and any participating investigators will plan, direct, and perform the research. (Applicants for program project grants should request, from the address below, a copy of the NINCDS GUIDELINES FOR THE PREPARATION OF A PROGRAM PROJECT GRANT APPLICATION.)

APPLICATION AND REVIEW PROCEDURES

Application must be prepared on form PHS 398 (revised 9/86) according to the applicable instructions included in the application kit. These kits are available from the business offices of most institutions or from the Division of Research Grants, National Institutes of Health.

Receipt dates for new research project grant (R01) applications and for program project grant (P01) applications are February 1, June 1, and October 1.

On page 1 of form PHS 398, check "yes" in item 2 and type: "NINCDS Announcement: Spinal Cord Injury and Repair." For R01 applications, use the mailing label provided in the application kit and mail the signed original and six exact copies of it to the Division of Research Grants (DRG). For P01 applications, send the original and four copies to:

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

Send two copies to the NINCDS at the address cited below.

Research project grant (R01) applications will be reviewed for scientific and technical merit by an appropriate study section in the Division of Research Grants. Program project grant (P01) applications will be reviewed by an appropriate review group in the NINCDS. Secondary review will be by the National Advisory Neurological and Communicative Disorders and Stroke Council. Applications judged to be within the purview of other Institutes of the NIH will be assigned accordingly, and, for the program project grant application, reviewed according to that Institute's prevailing practice.

Further information may be obtained from:

Dr. Mary Ellen Michel
Division of Stroke and Trauma, NINCDS
Federal Building, Room 8A13
Bethesda, Maryland 20892
Telephone: (301) 496-4226

This program is described in the Catalogue of Federal Domestic Assistance, Number 13.853 and 13.854, Stroke, Nervous System Trauma. Grants will be awarded under the authority of the Public Health Service Act, Title IV, 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 to review by a Health Systems Agency.

**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

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