

# NIH GUIDE

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## For Grants and Contracts

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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. 1  
January 4, 1991

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NOTICES

NATIONAL RESEARCH SERVICE AWARD STIPEND INCREASE

P.T. 22, 44; K.W. 0720005, 1014006

Public Health Service

Effective October 1, 1990, the annual stipend levels for all individuals receiving support through institutional or individual National Research Service Awards (NRSA) made under Section 487 of the Public Health Service Act will be as follows:

<u>Level of Training</u>	<u>Years Of Experience</u>	<u>FY 1991 Stipend Level</u>
Predoctoral	All	\$8,800
Postdoctoral	0	\$18,600
	1	\$19,700
	2	\$25,600
	3	\$26,900
	4	\$28,200
	5	\$29,500
	6	\$30,800
	7 or more	\$32,300

Stipend level adjustments can be made only on the award date of the fellowship or the appointment date of the trainee. These stipend levels are effective only for awards made beginning with FY 1991 funds; no retroactive adjustments or supplementation of stipends with NRSA funds for awards made prior to October 1, 1990, or with funds from FY 1990 is permitted. These stipends do not apply to awards made under the Minority Access to Research Careers (MARC) Honors Undergraduate Program.

The new stipend levels are to be used in the preparation of future NRSA institutional training and individual fellowship applications. They will be administratively applied to all applications now in the review process.

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

NOTICES OF AVAILABILITY (RFPs AND RFAs)

CLINICAL CORE CENTERS FOR ORAL HEALTH RESEARCH

RFA AVAILABLE: DE-91-02

P.T. 04; K.W. 0715148, 0710030, 0785035, 0745027

National Institute of Dental Research

Letter of Intent Receipt Date: April 2, 1991  
Application Receipt Date: May 6, 1991

The National Institute of Dental Research (NIDR) seeks applications from U.S. institutions to support Clinical Core Centers for Oral Health Research (CCCOHR). Core center grants are intended to facilitate and stimulate clinical research to improve oral health in adults, senior citizens, and others at higher oral disease risk. This Request for Applications (RFA) represents one step in the implementation of a major NIDR initiative, the Research and Action Program for Improving the Oral Health of Older Americans and Other Adults at High Risk.

Eligible institutions must have a base of high-quality, ongoing or pending clinical oral health research projects that are of potential relevance to the Research and Action Program initiative. The CCCOHRs will provide shared resources to facilitate and expand these clinical research projects. This RFA announces a single competition with an application receipt date of May 6, 1991.

RESEARCH GOALS AND SCOPE

The CCCOHRs will help develop state-of-the-art clinical research capacity in dental schools and dental research institutions through supporting shared resources and facilities to strengthen and expand clinical research relevant to improving oral health in adults and high-risk populations. The CCCOHRs are expected to provide a nucleus around which additional clinical studies, funded through public or private sources, can be structured. The CCCOHRs will facilitate the transfer of new scientific knowledge into improved methods for preventing oral disease in adults and high-risk groups, and foster more effective interdisciplinary collaborations among researchers and clinicians.

CENTER CHARACTERISTICS

Each CCCOHR must be a clearly defined organizational entity within a dental school or dental research institution. Funding will support core research resources and facilities. Each CCCOHR must include a minimum of three core units, and each core unit must provide a shared resource enhancing research productivity in at least two funded projects. Both administrative and biostatistics core activities are mandatory. Laboratory cores, diagnostics cores, and core support for unique clinical facilities (e.g., mobile units or work-site based dental operatories), as well as other types of shared facilities/resources to facilitate or expand ongoing clinical research, may be supported.

Up to 20 percent of the total CCCOHR direct cost budget per year may support pilot or feasibility studies. These are the only research projects that will be directly supported by the CCCOHR. Each pilot or feasibility project may cost no more than \$25,000 per year; up to two years of support may be requested.

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.

#### FUNDING MECHANISM

The Centers will be supported by Center Core Grants (P30). Awards will be for five-years and may commence as early as September 15, 1991. Applicants may request up to \$300,000 in direct costs for the initial year's budget. Requested increases may not exceed four percent per year in each subsequent year. Development of expanded funding for both CCCOHR activities and clinical research projects from other sources (e.g., industry, foundations, or other government agencies), is encouraged. A minimum of two awards is planned, if a sufficient number of high-quality applications is received. Awards are contingent upon the NIDR's receipt of appropriated funds for this purpose. Policies governing research grant programs of the National Institutes of Health will prevail. No more than one Core Research Center (P30) grant will be awarded to any institution.

#### REVIEW PROCEDURES AND CRITERIA

Applications will be evaluated by a special review committee convened by the NIDR Scientific Review Branch. Secondary review will be conducted by the National Advisory Dental Research Council. Waivers of the receipt deadline and budget limitation will not be granted.

Funding decisions will be based on recommendations of the initial review group and the National Advisory Dental Research Council. Review will include consideration of the scientific merit and relevance of the proposed pilot projects, core units, and the ongoing clinical research projects the CCCOHR will serve; the organization of CCCOHR-supported and independently supported activities into a cohesive program likely to enhance and stimulate relevant clinical research; total costs to the NIDR; and the availability of funds appropriated for this purpose. Consideration will also be given to whether complementary projects, supported from non-NIDR funds, contribute to the cost effectiveness of the proposed Center. If projects have similar merit, but vary in cost competitiveness, funding decisions are likely to favor more cost-competitive projects.

#### APPLICATION PROCEDURES

Prospective applicants are advised to contact program staff early in the planning phase of application preparation and to submit a letter of intent no later than April 2, 1991. This letter should include the names of all key personnel, identify the institution(s) or organizations participating, and provide a descriptive title for each core unit and all proposed pilot or feasibility studies. The letter of intent is not binding, nor a prerequisite for acceptance of an application.

Applications should 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, all inquiries, and letters of intent should be directed to:

Patricia S. Bryant, Ph.D.  
Health Scientist Administrator  
Extramural Program  
National Institute of Dental Research  
Westwood Building, Room 506  
Bethesda, MD 20892-4500  
Telephone: (301) 496-7807

The full RFA is also available from the E-Guide, the electronic version of the NIH Guide for Grants and Contracts.

This program is described in the Catalog of Federal Domestic Assistance No. 93.1212. Awards will be made under authorization 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

### MINORITY INSTITUTIONS TRAVEL AWARD PROGRAM

PA: PA-91-17

P.T. 34, 48, FF; K.W. 1215018

National Center for Human Genome Research

Application Receipt Dates: See Sections A and B

The National Center for Human Genome Research (NCHGR) invites applications to support students and faculty in minority institutions to attend scientific meetings, courses, and workshops relevant to the Human Genome Program. The Minority Institution Travel Award Program (MITAP) has been established to increase the participation of students and faculty from minority institutions in human genome research and research training programs. Under this program, travel funds will be awarded through two mechanisms: (1) supplements to active research grants that will support individuals and (2) conference grants (R13) to support groups. Each is described below following the Background section.

#### BACKGROUND

The NCHGR supports the Human Genome Program that has as its goal: completion of a high-density genetic map of the human genome; construction of a high-resolution physical map comprised of large overlapping contigs; development of a "sequence-tagged site" map; development of technology to reduce the expense of DNA sequencing significantly below current cost; development of computer tools to manage and provide access to mapping and sequencing data; examination of the legal, ethical, and social implications of the Human Genome Program; and research training. These goals are discussed in detail in the document, "A Five-Year Plan for the Human Genome Project," available from the Human Genome Management Information System, Oak Ridge National Laboratory, Oak Ridge, TN 37831-6050; (615) 576-6669.

The NCHGR is committed to increasing the number of students and faculty in minority institutions who will participate in accomplishing the goals of the Human Genome Program and applying the results to biological, medical, and biotechnological research. There are a variety of opportunities for research and training that are available through the regular NCHGR grant program, the minority supplement research program, the institutional training grant program, and the individual postdoctoral fellowship program. The Minority Institution Travel Award Program provides additional opportunities for students at various stages of academic development and for faculty members who are enrolled and employed, respectively, in minority institutions to participate in the Human Genome Program.

#### A. SUPPLEMENTS TO ACTIVE RESEARCH GRANTS

Application Receipt Date: At least 3 months prior to date of meeting, course, or workshop.

Any NIH grantee whose research is relevant to the Human Genome Program and is interested in obtaining travel funds for students or faculty from minority institutions to attend scientific meetings, workshops, or courses may request supplemental grant support from the NCHGR.

#### DEFINITIONS, ELIGIBILITY, AND TERMS OF SUPPLEMENTAL AWARDS

1. **Minority Institution.** A minority institution is defined as an institution in which the student enrollment is at least 50 percent minority. A minority individual is defined as a member of any of the following groups: Black Americans, Hispanic Americans, Native Americans (American Indians or Alaskan Natives), Asian-Pacific Islanders.

2. **Student.** The definition of student includes undergraduate, predoctoral, or postdoctoral students enrolled or pursuing training at a minority institution.

3. **Faculty.** A faculty member is defined as a full-time faculty member who is employed by a minority institution and is interested in or engaged in biomedical research.

4. Scientific Meeting, Course, or Workshop. A scientific meeting in the context of this program is defined as any national or international scientific meeting, short course, or workshop relevant to the Human Genome Program.

5. Principal Investigator. Principal Investigators of active NIH grants relevant to the Human Genome Initiative are eligible to submit supplemental applications on behalf of a student or faculty member. The Principal Investigator (or other designated senior investigator on the grant) is expected to serve as a guide or mentor for the student or faculty member while at the scientific meeting, course, or workshop.

6. Travel Funds. Travel funds include air and/or ground transportation, per diem allowance, and registration fees or tuition associated with the meeting, course, or workshop. The specific budget items must be justified in the application.

7. Other Considerations. It is desirable that the student or faculty member be accompanied by the Principal Investigator or designated senior investigator when attending a scientific meeting. In the case of a workshop or a course, this is not a requirement, although the Principal Investigator must demonstrate that there will be some follow-up or informal discussions about the scientific contents of the workshop or course with the student or faculty member following completion of the activity. The Principal Investigator is also encouraged to discuss the type of research and career opportunities that are supported by the Human Genome Program and that are available through universities, other institutions, and NIH.

8. Travel Report. In order to evaluate the effectiveness of this program, the student or faculty member will be requested to prepare a brief report for submission through the Principal Investigator. This report will be due 30 days after returning from the meeting, course, or workshop and is to be sent to the program official whose name appears on the Notice of Grant Award. In addition, the Principal Investigator must include the report in the annual and/or final grant progress report.

#### METHOD OF APPLYING

Potential applicants are strongly encouraged to contact the NCHGR's program official listed below prior to preparing an application.

The Principal Investigator must submit a supplemental grant application through his/her institution on the standard form PHS 398 (Rev. 10/88) and should include only the following: (1) face page--item 2 should give the grant number of the active grant and specifically state "Minority Institution Travel Award Program" (for example: R01 AB12345-03, "Minority Institution Travel Award Program"); (2) budget page; (3) complete curriculum vitae of the individual for whom support is being requested; and (4) information addressing the review criteria described below.

#### APPLICATION PROCEDURES AND REVIEW CRITERIA

Supplemental applications submitted in response to this announcement will be reviewed for eligibility by the senior staff of the NCHGR using the following criteria:

##### 1. For Students:

- o Completion of at least the sophomore year in college or enrollment in a predoctoral or postdoctoral program (exceptions will be considered if justification is furnished);
- o Recommendation from one science faculty member or researcher other than the Principal Investigator;
- o A brief written statement describing reasons for attending the meeting, benefits to be derived, and anticipated long-range professional plans as they relate to biomedical research in general and the Human Genome Program specifically.

##### 2. For Faculty:

- o A brief written statement indicating research interests, benefits to be derived by attendance at the meeting, and long-range professional plans as they relate to biomedical research in general and the Human Genome Program specifically;
- o Two letters of recommendation from the institution, including one from the Dean or Department Chairperson.



The original and six copies of the application should be submitted to:

Office of Scientific Review  
Building 38A, Room 605  
National Center for Human Genome Research  
National Institutes of Health  
Bethesda, MD 20892

Applications may be submitted at any time but must be submitted for a duration to coincide with the end of the appropriate budget period of the grant. The requested start date for the supplemental award should be at least 90 days after the date of submission of the application.

#### FUNDING

Approved applications will be funded as supplements to active PHS grants including individual research (R01, R29, R37), program project (P01), and center (P30, P50) grants. R29 grants cannot be supplemented if the amount requested will result in the total direct cost for the five-year period exceeding the \$350,000 limit. Funds awarded under this program are for the sole purpose of facilitating participation of students and faculty from minority institutions in scientific meetings, workshops, and courses relevant to the Human Genome Program.

For more information about grant supplements, please contact:

Bettie J. Graham, Ph.D.  
National Center for Human Genome Research  
Building 38A, Room 613  
National Institutes of Health  
9000 Rockville Pike  
Bethesda, MD 20892  
Telephone: (301) 496-7531  
e-mail address: B2G@NIHCU.bitnet  
B2G@CU.NIH.gov

The program official welcomes the opportunity to discuss this program with interested applicants and Principal Investigators and encourages telephone, e-mail, or written inquiries.

#### B. CONFERENCE GRANTS

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

Individuals, organizations, institutions, or professional societies may apply for conference grant funds to support students and faculty from minority institutions attending scientific meetings, workshops, and courses relevant to the Human Genome Program. The purpose of this initiative will be to provide, in addition to support for regular attendance, enrichment activities that would make the experience more meaningful for participants who are not familiar with the Human Genome Program. Examples of enrichment activities are: round-table discussions about the latest advances in genomic research, in-depth discussions of selected posters presented at the meeting, and panel discussions about research and training opportunities available at different educational and research institutions. These examples are meant to be illustrative and not to be all-inclusive. Applicants must demonstrate in the application that the enrichment activities will be incorporated into the overall activities of the meeting, workshop, or course and have the full support of the meeting/course organizer or council of the professional society. It is expected that as a result of participating in this comprehensive program, attendees would have a greater appreciation of the Human Genome Program and the type of research it supports and the types of research and career opportunities available through universities, other institutions, and the NIH. The anticipated long-range outcome would be that more students and faculty members from minority institutions would consider a career in one of the research disciplines relevant to the Human Genome Program.

#### MECHANISM OF SUPPORT

Support for this program will be through the conference grant mechanism (R13). Allowable costs include air and ground transportation, per diem allowance, and registration fees or tuition associated with the meeting, course, or workshop.

#### APPLICATION PROCEDURES AND REVIEW CRITERIA

Potential applicants are encouraged to contact the NCHGR program official listed below prior to preparing an application.

Applications in response to this announcement will be reviewed in accordance with the usual NIH peer review procedures.

The following will be considered in evaluating applications:

- o Overall scientific merit;
- o Quality of the enrichment activities;
- o Criteria for selecting participants; especially those who are under-represented in the biomedical sciences in general and genomic research specifically;
- o Adequacy of recruitment plans;
- o Potential for increasing the number of students and faculty at minority institutions who are interested in pursuing a career or research project in genomic research.

Following the initial review, applications will be considered by the appropriate National Advisory Council.

#### METHOD OF APPLYING

Applications should be submitted at least 10 months in advance of the conference/scientific meeting date and on Form PHS 398 (revised 10/88). Application kits are available in most institutional business offices and from the Office of Grants Inquiries, Westwood Bldg., Room 449; National Institutes of Health, Bethesda, MD 20892.

Instructions for conference grant applications should be followed. Applications will be accepted in accordance with the usual NIH receipt dates (February 1, June 1, and October 1). It is essential that applicants type "Minority Institution Travel Award Program" in item 2 on the face page of the application form. The original and six copies of the application should be submitted to the following office:

Application Receipt Office  
Division of Research Grants  
Westwood Building, Room 240  
National Institutes of Health  
Bethesda, MD 20892\*\*  
Telephone: (301) 496-7273

#### FUNDING

Applications will compete for available funds with all other approved applications. Funding decisions will be based on recommendations of the initial review group and of the appropriate National Advisory Council regarding scientific merit and program relevance.

For more information about conference grants, applicants may contact:

Bettie J. Graham, Ph.D.  
National Center for Human Genome Research  
Building 38A, Room 613  
National Institutes of Health  
9000 Rockville Pike  
Bethesda, MD 20892  
Telephone: (301) 496-7531  
e-mail address: B2G@NIHCU.bitnet  
B2G@CU.NIH.gov

The program official welcomes the opportunity to discuss this program with interested applicants and encourages telephone, e-mail, or written inquiries.

## BIOTECHNOLOGY RESEARCH TRAINING

PA: PA-91-18

P.T. 44; K.W. 0710035

National Institute of General Medical Sciences

Application Receipt Dates: January 10, May 10, September 10  
March 22, 1991 for 1991 only (T32 only)

Congress has significantly increased the support for biotechnology research training for fiscal year 1991. Consequently, the National Institute of General Medical Sciences (NIGMS) reannounces its predoctoral and postdoctoral research training programs in the area of biotechnology. These programs differ from existing NIGMS research training programs primarily in their emphasis on engineering, mathematical, and physical research methods and approaches to the analysis of biological processes. Consistent with the Office of Technology Assessment's definition of biotechnology as "any technique that uses living organisms (or parts of organisms) to make or modify products, to improve plants or animals, or to develop microorganisms for specific uses," these research training programs are designed to enhance technological explorations leading to the development of new or improved biotechnology products and services. Research training to be supported under this announcement includes predoctoral (T32) institutional training grants, individual postdoctoral (F32) fellowships, and senior (F33) fellowships.

The NIGMS currently supports predoctoral research training through National Research Service Award (NRSA) institutional training grants in five major programs: Cellular and Molecular Biology, Genetics, Molecular Biophysics, Pharmacological Sciences, and Systems and Integrative Biology. In addition, postdoctoral fellowship awards support interdisciplinary research training with a strong emphasis on basic research. The Institute's goal in these programs is to provide trainees with broad access to research opportunities across disciplinary and departmental lines, while not sacrificing the standards of depth and creativity characteristic of the best Ph.D. programs of individual departments. Cooperative involvement of faculty members from several departments as research mentors is considered evidence of such breadth.

The enormous growth of the biotechnology industry has resulted in critical shortages of experts in biochemical engineering, biocomputation, macromolecular structure, protein engineering, immunogenetics, protein chemistry, separation technologies, and other areas that coincide with the major biotechnology research needs. NIGMS support for new biotechnology programs is intended to help fill this need by providing research training that focuses on the applications of engineering, physics, chemistry, mathematics, and biology to those areas of biomedical research related to biotechnology. Involvement of faculty from the physical and biological sciences, as well as a curriculum that bridges these two disciplines, are considered essential for biotechnology training programs. While there is also an increasing demand for bioscientists trained in more classical areas, such as biological chemistry, cell biology, enzymology, microbial ecology, microbial physiology, molecular genetics, pharmacology/toxicology, physiology, and virology, it is expected that these individuals will participate in the more traditional training programs described in the preceding paragraph. Biotechnology training programs are NOT intended to duplicate those existing programs.

### **PREDOCTORAL RESEARCH TRAINING GRANTS**

Applications requesting support of PREDOCTORAL RESEARCH TRAINING in biotechnology should accommodate the following considerations:

- o Biotechnology research training should be an interdisciplinary enterprise targeted toward the production of a new cadre of scientists with facility and orientation to combine basic and applied research. Because students entering the program will have different backgrounds, biotechnology training programs should have sufficient flexibility to accommodate a variety of candidates with fundamentally sound preparation in, for example, chemical engineering, biology, applied mathematics, chemistry, computer science, biochemistry, or physics.
- o Biotechnology research training should provide for a significant amount of laboratory experience based on state-of-the-art common methodologies (e.g., bioprocess engineering, plant and animal cell culture technologies, biocomputing, macromolecular structure

analyses, hybridoma technology, molecular genetics, cell fractionation, and separation technologies).

- o To ensure formal mechanisms for multidepartmental organization and truly inter- (or cross-) disciplinary training, and to make provisions for academic and industrial collaborations in research training, it is desirable that these training programs be established at academic institutions with viable biotechnology research programs (centers, institutes, or consortia). Scientists from both the industrial and academic sectors should participate in such research training programs. To ensure an appropriate balance of basic and applied biotechnology research experiences and perspectives, it is desirable that trainees participate in internships in biotechnology industries or that an alternative mechanism to such internships is available as an integral part of the training program.
- o It is expected that the Federal resources committed to the support of biotechnology research training be augmented by cost-sharing mechanisms, employing the university or state's resources, as well as those of industries collaborating with these biotechnology research and research training institutions.

The stipend level for predoctoral trainees is \$8,800 per annum. In addition, the applicant institution may request up to \$1,500 per year for each predoctoral trainee for essential direct support costs to the training program. Tuition support for each trainee may be requested in accordance with amounts charged to other graduate students. Indirect cost will be paid at 8 percent of total allowable direct costs less tuition.

Institutional training grants are made for project periods of up to 5 years and are renewable. However, no single predoctoral trainee may receive more than 5 years of support unless a special waiver is obtained.

#### INDIVIDUAL FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS in biotechnology are welcomed from applicants trained in engineering, mathematical, or physical sciences who desire to bring such approaches to biotechnology research or from biologists who wish to acquire research training in biocomputation, protein engineering, macromolecular analyses, or other areas related to biotechnology. Applications from candidates seeking postdoctoral training in biotechnology industrial settings are especially encouraged.

The stipend level for the individual postdoctoral fellowship ranges from \$18,600 to \$32,300 depending on years of relevant experience subsequent to the award of the doctorate degree. In addition, the applicant's institution/organization may request an institutional allowance up to \$3,000 per year for support of supplies, equipment, travel, tuition, fees, insurance, and other training-related costs.

Individual postdoctoral fellowships are made for project periods of up to 3 years.

SENIOR FELLOWSHIPS will be supported for experienced investigators in the biological, engineering, mathematical, or physical sciences who desire to acquire experiences/training in areas more directly related to biotechnology. The stipend level is currently \$30,000 per annum for project periods of up to 2 years. The applicant's institution/organization may request an institutional allowance up to \$3,000 per year for support of supplies, equipment, travel, tuition, fees, insurance, and other training-related costs.

More detail on the policies governing the institutional predoctoral training Westwood Building, Room 449 grant, the postdoctoral fellowships, and the senior fellowship awards can be found in the National Research Service Awards Guidelines published in the NIH Guide for Grants and Contracts, Vol. 13, No. 1, January 6, 1984.

Application materials are available from the university business office or from:

Office of Grants Inquiries  
Division of Research Grants  
National Institutes of Health  
Bethesda, MD 20892

Deadlines for receipt of all types of applications included in this announcement are January 10, May 10, and September 10. For Fiscal Year 1991

ONLY there will be one additional deadline of March 22, 1991 for receipt of applications for INSTITUTIONAL PREDOCTORAL RESEARCH TRAINING GRANTS. Applications in response to this announcement for the March 22, 1991, deadline should indicate in response to Item #2 on the 398 face page: BIOTECHNOLOGY RESEARCH TRAININGi, PA-91-18.

The signed original and four copies of the application should be sent to:

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

Applicants who are planning to submit for the March 22 deadline are strongly encouraged to contact Dr. Christine Carrico at (301) 496-7707 as soon as possible. To expedite the review process, in addition to the required copies submitted to the Division of Research Grants, two copies of the application should be submitted directly to:

Office of Review Activities  
National Institute of General Medical Sciences (NIGMS)  
Westwood Building, Room 9A18  
Bethesda, MD 20892

For further information, please contact:

Dr. Christine K. Carrico, Ph.D.  
Director, Pharmacological Sciences Program  
National Institute of General Medical Sciences (NIGMS)  
5333 Westbard Avenue, Room 919  
Bethesda, MD 20892  
Telephone: (301) 496-7707

#### BIOMEDICAL RESEARCH SUPPORT SHARED INSTRUMENTATION GRANTS

PA: PA-91-19

P.T. 34; K.W. 0735000, 1014001, 0735015

National Center for Research Resources

Application Receipt Date: March 26, 1991

#### BACKGROUND

The National Center for Research Resources (NCRR) is continuing its competitive Biomedical Research Support (BRS) Shared Instrumentation Grant (SIG) Program initiated in Fiscal Year 1982. The program was established in recognition of the long-standing need in the biomedical research community to cope with rapid technological advances in instrumentation and the rapid rate of obsolescence of existing equipment. The objective of the program is to make available, to institutions with a high concentration of Public Health Service (PHS)-supported biomedical investigators, research instruments that can only be justified on a shared-use basis and for which meritorious research projects are described.

An eligible institution may submit more than one application for different instrumentation for the March 26, 1991, deadline. However, if multiple applications are submitted for similar instrumentation from one or more eligible components of an institution, then documentation from a high administrative official must be provided, stating that the multiple applications are a coordinated institutional resource plan, not an unintended duplication.

#### RESEARCH GOALS AND SCOPE

This program is designed to meet the special problems of acquisition and updating of expensive shared-use instruments which are not generally available through other PHS mechanisms, such as the individual research project, program project and center grant programs, the Biomedical Research Technology Grant Program, or the Biomedical Research Support (BRS) Grant Program. Proposals for the development of new instrumentation will not be considered.

## ELIGIBILITY

The BRS Shared Instrumentation Grant Program is a subprogram of the BRS Grant Program of NCRR. Awards are made under the authority of the BRS program and are made to institutions only, not to individuals. Therefore, eligibility is limited to institutions that receive a BRS grant award. Awards are contingent on the availability of funds.

## MECHANISM OF SUPPORT

BRS Shared Instrumentation Grants provide support for expensive state-of-the-art instruments utilized in both basic and clinical research. Applications are limited to instruments that cost at least \$100,000 per instrument or system. The maximum award is \$400,000. Types of instrumentation supported include, but are not limited to, nuclear magnetic resonance systems, electron microscopes, mass spectrometers, protein sequencer/amino acid analyzers, and cell sorters. Support will not be provided for general purpose equipment or purely instructional equipment. Proposals for "stand alone" computer systems will only be considered if the instrument is solely dedicated to the research needs of a broad community of PHS-supported investigators.

Awards will be made for the direct costs of the acquisition of new, or the updating of existing, research instruments. The institution must meet those costs (not covered in the normal purchase price) required to place the instrumentation in operational order as well as the maintenance, support personnel, and service costs associated with maximum utilization of the instrument. There is no upper limit on the cost of the instrument, but the maximum award is \$400,000. Grants will be awarded for a period of one year and are not renewable. Supplemental applications will not be accepted. The program does not provide indirect costs or support for construction or alterations and renovations. If the amount of funds requested does not cover the total cost of the instrument, the application should describe the proposed source(s) of funding for the balance of the cost of the instrument. Documentation of the availability of the remainder of the funding, signed by an appropriate institutional official, must be presented to NCRR prior to the issuance of an award. Requests for a multiple instrument purchase totalling over \$400,000 must specify and justify which instrument(s) should be supported within the \$400,000 ceiling.

Applicants proposing the direct purchase of an instrument that the institution has secured or is planning to secure via a leasing agreement are strongly encouraged to consult with their institutional sponsored projects office regarding applicable PHS policy prior to executing the leasing agreement. If the leasing agreement was executed more than one year prior to submission of the SIG application, the applicant must provide strong justification for the requested Federal funds. Further, the instrument must be considered state-of-the-art at the time of submission of the SIG application.

A major user group of three or more investigators should be identified. A minimum of three major users must have PHS peer-reviewed research support at the time of the award; 50 percent of these grants must have been awarded by the NIH. The application must show a clear need for the instrumentation by projects supported by multiple PHS research awards and demonstrate that these projects will require at least 75 percent of the total usage of the instrument. Major users can be individual researchers, or a group of investigators within the same department or from several departments at the applicant institution. PHS extramural awardees from other institutions may also be included.

If the major user group does not require total usage of the instrument, access to the instrument can be made available to other users upon the advice of the internal advisory committee. These users need not be PHS awardees, but priority should be given to PHS-supported scientists engaged in biomedical research.

## ADMINISTRATIVE ARRANGEMENTS

Each applicant institution must propose a Principal Investigator who can assume administrative/scientific oversight responsibility for the instrumentation requested. An internal advisory committee to assist in this responsibility should also be utilized. The Principal Investigator and the advisory group are responsible for the development of guidelines for shared use of the instrument, for preparation of all reports required by the NIH, for relocation of the instrument within the grantee institution if the major user group is significantly altered and for continued support for the maximum utilization and maintenance of the instrument in the post-award period.

A plan should be proposed for the day-to-day management of the instrument including designation of a qualified individual to supervise the operation of the instrument and to provide technical expertise to the users. Specific plans for sharing arrangements and for monitoring the use of the instrument should be described.

If a grant award is made, a final progress report will be required that describes the use of the instrument, listing all users, and indicating the value of the instrumentation to the research of the major users and to the institution as a whole. This report is due within 90 days following the end of the project period.

#### REVIEW PROCEDURES AND CRITERIA

Applications are reviewed by specially convened initial review groups of the Division of Research Grants (DRG) for scientific and technical merit and for program considerations by the National Advisory Research Resources Council (NARRC) of the NCRR. Approximately half of the applications will be reviewed at the September 1991, NARRC meeting and the remainder at the NARRC meeting in February 1992. Funding decisions on all applications received for the March 26, 1991, deadline will not be made until the program receives an appropriation for FY 1992. The Council date will not affect funding decisions.

Criteria for review of applications include the following:

- o The extent to which an award for the specific instrument would meet the scientific needs and enhance the planned research endeavors of the major users by providing an instrument that is unavailable or to which availability is highly limited.
- o The availability and commitment of the appropriate technical expertise within the major user group or the institution for use of the instrumentation.
- o The adequacy of the organizational plan and the internal advisory committee for administration of the grant including sharing arrangements for use of the instrument.
- o The institution's commitment for continued support of the utilization and maintenance of the instrument.
- o The benefit of the proposed instrument to the overall research community it will serve.

#### METHOD OF APPLYING

Copies of a more detailed announcement are being mailed to Program Directors of BRS grants and to sponsored program offices at all institutions currently receiving BRS grants. Interested investigators should obtain the complete announcement prior to preparing an application.

Applications must be received by March 26, 1991. Applications received after this date will not be accepted for review in this competition. The original and four copies should be sent to:

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

If appendix material is submitted, five collated sets must be included with the application package. Identify each of the five sets with the name of the principal investigator and the project title. This material will not be routinely duplicated and will be used in a limited way by members of the initial review group.

Two copies of the application and one copy of any appendix material should also be addressed to:

Biomedical Research Support Program  
National Center for Research Resources  
National Institutes of Health  
Westwood Building, Room 10A06  
5333 Westbard Avenue  
Bethesda, MD 20892\*\*

Inquiries should be directed to the Biomedical Research Support Program Office at (301) 496-6743.

This program is described in the Catalog of Federal Domestic Assistance number 93.337, Biomedical Research Support. Awards will be made under the authority of the Public Health Service Act, 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.

\*\*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