

NATIONAL INSTITUTE OF
GENERAL MEDICAL SCIENCES

A N N O U N C E M E N T

INSTITUTIONAL NATIONAL RESEARCH SERVICE AWARDS

The National Institute of General Medical Sciences is currently accepting applications from eligible institutions for support of highly selected, promising individuals who seek biomedical research training in the areas specified below.

It is the Institute's goal in the predoctoral programs to provide trainees broader access to thesis research opportunities across discipline and department lines while not sacrificing the standards of depth and creativity characteristic of the best Ph.D. programs. Cooperative involvement of faculty members from several departments as thesis research mentors is considered evidence for such breadth.

Programs for postdoctoral trainees should offer a wide range of research training opportunities. For individuals holding the Ph.D. degree, training should focus on advanced and specialized areas of research and offer appropriate opportunities to study clinical problems. For trainees holding a professional degree, at least two years of rigorous research training should be provided which is usually best accomplished in basic science departments.

The applicant is expected to present a detailed plan for the proposed training as well as criteria for trainee selection and mechanisms for quality control. The application should also give information on the qualifications of the proposed faculty participants, including their experience as trainers and their current research programs and support.

Separate applications for support of predoctoral and postdoctoral research training are required. In general, only one award in each of the nine areas listed below will be made to an institution. Further information regarding dates of application and notification, tenure, stipends, trainee eligibility, and required payback provisions may be found in the *NIH GUIDE FOR GRANTS AND CONTRACTS*, Vol. 5, No. 9, July 2, 1976.

For general information about these institutional NRS Award Programs, contact Dr. Margaret Carlson, Training Officer, National Institute of General Medical Sciences, Bethesda, Maryland 20014, telephone (301) 496-7585. For additional information in preparing an application for a specific area, call the indicated staff member.

NIGMS AREAS OF SUPPORT

Predocutorial Institutional National Research Service Awards

1. Cellular and Molecular Biology

Programs should be of a cross-disciplinary nature and involve in-depth study of biological problems at the level of the cellular and molecular sciences. The research training offered should bring together components of at least two departments or Ph.D.-degree programs (such as anatomical sciences, biochemistry, biophysics, chemistry, developmental biology, genetics, immunology, microbiology, neurobiology, and pathology).
Dr. Russell Hilmoe - (301) 496-7463

2. Genetics

Programs should emphasize the principles and mechanisms of genetics, with collaboration of faculty members representing a number of disciplines and research areas which may include chemistry, biochemistry, cell regulatory processes, population and behavioral aspects of heredity, and developmental biology. Dr. Dorothea S. Miller - (301) 496-7137

3. Pharmacological Sciences

Training should emphasize the acquisition of competence in the broad fields of pharmacology and toxicology to conduct research on drug actions and effects in living cells, in animals, and in man - ranging from the chemical to the clinical level, with thesis research opportunities in such disciplines/departments as biochemistry, chemistry, genetics, medicinal chemistry, physiology, and the neuro- and behavioral sciences as well as in pharmacology. Dr. Raymond Bahor - (301) 496-7707

4. Systems and Integrative Biology

Research training should bring together components of varied resources and approaches of such disciplines/departments as physiology, bioengineering, biomathematics, nutrition, anatomical sciences, and the neuro- and behavioral sciences into combinations that will build the broad research competence required to investigate integrative and developmental functions of higher organisms and their organ systems.
Dr. R. Burns Ross - (301) 496-7518

5. Medical Scientist Program

Interdisciplinary programs of integrated medical and graduate research training required for investigation of diseases in man. These programs assure highly selected trainees a choice of a wide range of pertinent graduate programs in the biological, chemical, physical, and social sciences combined with training in medicine leading to the combined M.D.-Ph.D. degree. The proposed program should be flexible and adaptable in providing each trainee with the appropriate background in the sciences relevant to medicine and be rigorous enough to enable the

individual to function independently in both basic research and clinical investigations. Dr. Vincent Price - (301) 496-7021

Postdoctoral Institutional National Research Service Awards

1. Basic Pathobiology

Advanced interdisciplinary training for post-Ph.D.'s from basic biological, biochemical, and biophysical sciences for research on fundamental problems of human disease; and training, for individuals holding a professional degree, that provides an in-depth knowledge of the principles and methods required for research at the cellular and molecular level in normal and diseased states. Dr. Edward Hampp - (301) 496-7563

2. Genetics (with emphasis on Medical Genetics)

Advanced and special research training in genetics, utilizing and applying the principles and fundamental mechanisms of genetics toward an understanding of human genetic disease. Trainees may be drawn from diverse biological and medical backgrounds for research with faculty representing various approaches to genetic research - ranging from biochemical genetics to human population genetics. Opportunities for training in medical genetics are considered desirable. Dr. Dorothea S. Miller - (301) 496-7137

3. Clinical Pharmacology

Advanced research training in clinical pharmacology. Individuals should receive experience in the methodology and conduct of clinical research to qualify them to investigate, in depth, the effects and the mechanisms of drug actions in humans. Trainees, who would usually have the M.D. degree, should have the opportunity to acquire fundamental scientific knowledge and research techniques in areas such as basic pharmacology, biochemistry, physiology, analytical methodology, and other biomedical subdisciplines. Dr. Raymond Bahor - (301) 496-7707

4. Trauma and Burn Research

Multidisciplinary research training for postdoctoral scientists to enhance their capability of advancing our knowledge of the body's complex reactions to trauma and burn injuries. The supervisory staff should include trauma surgeons and/or burn specialists as well as basic scientists; the program is expected to emphasize research training in fields such as physiology, biochemistry, immunology, and microbiology. Dr. Emilie Black - (301) 496-7373

INDIVIDUAL POSTDOCTORAL NATIONAL RESEARCH SERVICE AWARDS

The National Institute of General Medical Sciences is currently accepting applications from eligible individuals who seek biomedical research training in the areas specified below.

Information regarding dates of application and notification, tenure, stipends, eligibility, and payback requirements may be found in the *NIH GUIDE FOR GRANTS AND CONTRACTS*, Vol. 5, No. 9, July 2, 1976.

For additional general information about the individual National Research Service Awards, **contact** Dr. Roger Fuson, Fellowships Officer, National Institute of General Medical Sciences, Bethesda, Maryland 20014, telephone (301) 496-7368. For information specific to the listed program areas, call the indicated staff member.

Postdoctoral individual National Research Service Awards may be applied for in the following areas:

1. Cellular and Molecular Biology

Awards are provided to enable individuals holding the Ph.D. degree in the biological or physical sciences to acquire special advanced research training toward developing necessary cross-field knowledge for a research career in cell sciences - in areas such as membrane structure and function, cell motility, differentiation, enzyme catalysis and regulation, and proteins and other macromolecules, which are essential for an understanding of living systems at the cellular-molecular level. The fellowships enable individuals holding the M.D. degree to obtain the requisite background and skills in basic research to bring new knowledge at the subcellular and molecular level into medicine.
Dr. Russell Hilmoe - (301) 496-7463

2. Genetics (including Medical Genetics)

Awards are made for research training focusing on the principles and mechanisms of genetics. The aim is the further understanding of genetic processes in general and of human genetic disease. Applicants may propose research and study with investigators representing various approaches to genetics including biochemical, developmental, regulatory, population and clinical aspects of heredity. Dr. George W. Woolley - (301) 496-7137

3. Pharmacological Sciences (including Clinical Pharmacology)

Training should emphasize the acquisition of competence in the broad fields of pharmacology, clinical pharmacology, and toxicology to conduct research on drug action and effects on cells, animals, and man. Proposals from individuals with either a Ph.D. or a professional degree may range from the chemical to the clinical level of study and include training opportunities in such areas as biochemistry, physiology, medicinal chemistry, genetics, and other cognate fields. Dr. Raymond Bahor - (301) 496-7707

4. Systems and Integrative Biology (Physiology and Bioengineering)

Support for research training is offered to individuals holding a Ph.D. or professional degree who seek to apply engineering, physical and/or mathematical principles to biological and medical problems. Support is also available to individuals seeking competence in the in-depth and quantitative study of organs and systems involved in integrated physiological functions of animals and man. Dr. R. Burns Ross - (301) 496-7518

5. Clinically Oriented Areas

Research training support is offered (1) to individuals with the M.D. degree who are preparing for careers in clinical research; emphasis will be placed on proposals incorporating at least two years of training within such basic science departments as biochemistry, genetics, microbiology, immunology, physiology, pharmacology, psychology, or biostatistics; (2) to individuals with the Ph.D. degree who seek competence to apply the knowledge and methods of basic biomedical disciplines to medical problems, usually in close collaboration with clinical scientists. The following areas are represented:

Pathobiology - Dr. Edward Hampp (301) 496-7563
Anesthesiology - Dr. Emilie Black (301) 496-7373
Trauma and Burn Research - Dr. Emilie Black (301) 496-7373
Clinical Laboratory Sciences - Dr. Robert Melville
(301) 496-7081
Behavioral Science Related to Medicine - Dr. William Taylor
(301) 496-7081
Epidemiology - Dr. Margaret Carlson (301) 496-7585

In addition, the National Institute of General Medical Sciences offers individual National Research Service Awards under its Minority Access to Research Careers (MARC) Program. For information, contact Mr. Elward Bynum, Director, MARC Program, National Institute of General Medical Sciences, Bethesda, Maryland 20014, telephone (301) 496-7357.