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ABSTRACT

The rapid growth of the older population heightens the urgency for training in aging research. This publication outlines the opportunities for extramural research training and career development that exist within the National Institute on Aging (NIA). The NIA supports research and research training primarily through the award of grants and fellowships. Congress encourages the Institute's support of a wide range of research, including studies on Alzheimer's disease, long-term care, frailty, osteoporosis, nutrition, and rural health. Several NIA programs are aimed specifically at encouraging minorities to participate in aging research. Grants are awarded to nonprofit and for-profit organizations, universities, hospitals, research foundations, and agencies. Extramural research activities are developed by four NIA programs: (1) Behavioral and Social Research; (2) Biology of Aging; (3) Geriatrics; and (4) Neuroscience, and Neuropsychology of Aging. Each research grant application is subjected to peer review at two levels. Three review cycles are held each year. Awards for regular research grants, from initial review to start date, take approximately 10 months--decisions on individual predoctoral and postdoctoral fellowships can be made in 6 months. This booklet specifies the steps in applying for research grants and gives a synopsis of current extramural training opportunities, career development awards, and special programs. (RJM)

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Extramural Training and Career Opportunities in Aging Research

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National Institute on Aging

National Institutes of Health

■ Preface

The National Institute on Aging (NIA), created by Congress as one of the National Institutes of Health (NIH), is committed to encouraging excellence in aging research. This publication outlines the opportunities for extramural research training and career development that exist within the NIA.

The goal of aging research is to discover ways to improve the quality of life—to ensure longer, healthier, and more independent years. To accomplish this, scientists supported by the NIA seek to understand aging processes and to improve the diagnosis, treatment, and prevention of the diseases that affect older people.

The rapid growth of the older population increases the urgency for training in aging research. The larger number of people

over age 65 and the rise in the proportion of older to younger people are major demographic changes occurring as we approach the 21st century. In 1900 individuals over age 65 constituted 4 percent of the American population; today, 13 percent of the population is over 65 years old. By 2030 they are projected to reach 20 percent. This shift in population will have profound social, economic, medical, and personal consequences for which we must be prepared.

Through the extramural training and career development opportunities described in this brochure, the NIA encourages the preparation of scientific personnel to meet the needs of America's older population.

Abbreviations

CIA	Clinical Investigator Award
DHHS	Department of Health and Human Services
DRG	Division of Research Grants
FIRST	First Independent Research Support and Transition Award
GAP	Geriatric Academic Program
GLAA	Geriatric Leadership Academic Award
GRC	Gerontology Research Center
IRG	Initial Review Group
MARC	Minority Access to Research Careers
MBRS	Minority Biomedical Research Support
NACA	National Advisory Council on Aging
NIA	National Institute on Aging
NIGMS	National Institute of General Medical Sciences
NIH	National Institutes of Health
NRSA	National Research Service Award
PA	Program Announcement
PHS	Public Health Service
PSA	Physician Scientist Award
RCDA	Research Career Development Award
RFA	Request for Application
RFP	Request for Proposal
SERCA	Special Emphasis Research Career Award

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Introduction

Congress authorized the establishment of the National Institute on Aging with the 1974 Research on Aging Act and through subsequent amendments to the Public Health Service Act. The NIA, one of the 16 institutes of the National Institutes of Health, is responsible for the "conduct and support of biomedical, social, and behavioral research, training, health information dissemination, and other programs with respect to the aging process and the diseases and other special problems and needs of the aged." Congress encourages the Institute's support of a wide range of research, including studies on Alzheimer's disease, long-term care, frailty, osteoporosis, nutrition, and rural health. Several NIA programs are aimed specifically at encouraging minorities to participate in aging research.

The Institute's extramural programs fund research and research training at universities, hospitals, medical centers, and other public and private organizations and institutions. Extramural research activities are developed by four NIA programs: Behavioral and Social Research, Biology of Aging, Geriatrics, and Neuroscience and Neuropsychology of Aging.

General Information

NIA support for research and research training is provided primarily through the award of grants and fellowships. Grants are awarded to nonprofit and for-profit organizations, universities, hospitals, research foundations, and agencies. Foreign institutions and international organizations are eligible to receive only research project grants. Programs such as the Small Business Innovation Research grants, Academic Research Enhancement Awards, and Minority Access to Research Career grants have been established for certain categories of applicants. Several programs are aimed specifically at encouraging minorities and women to participate in research.

The Institute's special research initiatives are described in Program Announcements, Requests for Applications, and Requests for Proposals.

A Program Announcement (PA) describes or updates specific extramural research interests for which grant applications are invited.

A Request for Application (RFA) invites applicants to apply for a research grant in a well-defined scientific area. It is planned to accomplish a specific NIA programmatic purpose. The RFA has a designated submission date with funds set aside for a certain number of awards.

A Request for Proposal (RFP) solicits contracts to acquire specific services or products. Research contract awards may be made for the development and support of research resources including animal, cellular, and data resources or for the conduct of research that fulfills a specific research need.

The "NIH Guide for Grants and Contracts" 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 NIH. To be added to the mailing list for this guide, contact the NIH Office of Grants Inquiries, Division of Research Grants, Westwood Building, Room 449, Bethesda, Maryland 20892; (301) 594-7248. Research grant application forms are also available from this office and at most university offices of research.

Institute staff are available to discuss questions about NIA priorities. Questions about the appropriateness of research topics or the preparation of applications should be directed to the NIA Office of Extramural Affairs, 7201 Wisconsin Avenue, Bethesda, Maryland 20892; (301) 496-9322.

A packet of general information which includes a listing of current PAs and RFAs is available from the NIA Information Center, P.O. Box 8057, Gaithersburg, Maryland 20898-8057. Call 1-800-222-2225.

All stipends and salaries are listed at the 1993 level and are subject to change.

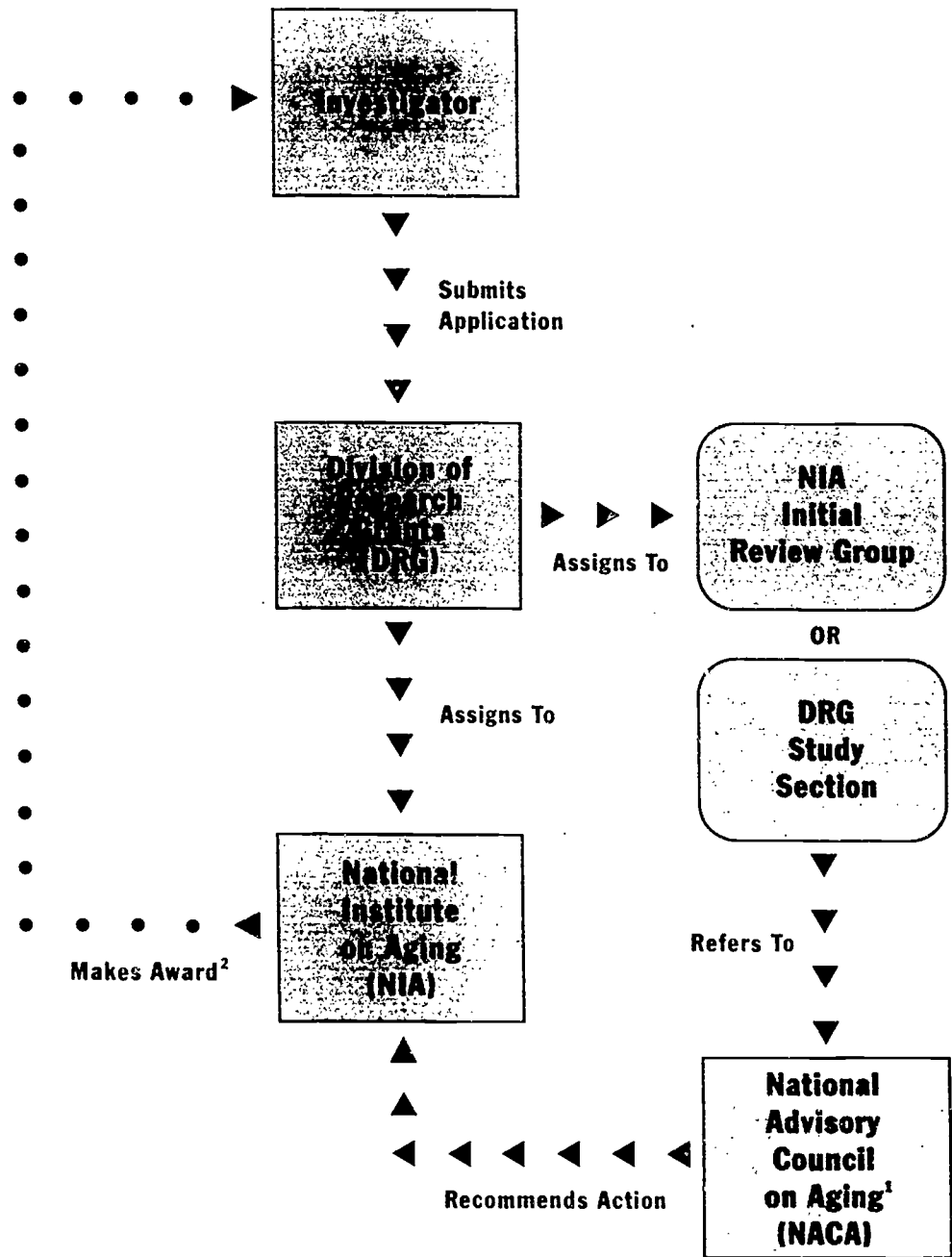
Research Grant Application and Review

In the NIH system of peer review each application is reviewed at two levels. The application is submitted to the NIH Division of Research Grants (DRG) where it is assigned to the appropriate Initial Review Group or Study Section for the first level of review. Study Sections include 15 to 20 outside experts who discuss each application and individually assign it a 3-digit priority score for scientific merit. Scores for each study section are then averaged and given a percentile ranking. Certain types of NIA grant applications—those for institutional training grants, career development awards (except Research Career Development Awards), and program projects—are reviewed by NIA Study Sections.

The second level of review is by the National Advisory Council on Aging. This Council includes both scientific and lay representatives with a demonstrated interest in aging. Council recommendations are based not only on scientific merit, as judged by the scientific review groups, but also on the relevance of the proposed study to the Institute's programs and priorities. The Council makes recommendations on funding to the Director.

Three review cycles are held each year. Receipt dates vary by type of mechanism and are listed in the descriptions of grants and fellowships. For regular research grants the process from initial review to start date takes approximately 10 months. Individual predoctoral and postdoctoral fellowships are given an expedited review and can be awarded within 6 months after receiving the application.

Steps of Research Grant Applications



¹ Fellowships are not sent to NACA.

² Determined by scientific merit, program consideration, availability of funds.

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Training and Development Programs

EXTRAMURAL

National Research Service Awards (NRSA)

	College Students	Graduate Students	Medical Students	Ph.D.'s	M.D.'s	Faculty	Institutions
Individual Postdoctoral Fellowship (F32)*				★		★	
Senior Postdoctoral Fellowship (F33)				★		★	
Institutional Training Grant (T32)		★		★			
Geriatric Research Institutional Training Award (T32)							
Complementary Institutional Training Grant (T32)		★		★			
Short-Term Training: Students in Health (T35)		★					

Career Development Awards

Special Emphasis Research Career Award (K01)				★			
Research Career Development Award (K04)				★		★	
Geriatric Leadership Academic Award (K07)						★	
Clinical Investigator Award (K08)							
Academic Award (K08)							
Physician Scientist Award/Program (K11/12)							
Geriatric Academic Program Award (K12)							★

SPECIAL PROGRAMS

MARC Faculty Fellowship (F34)							★
MARC Visiting Scientist Fellowship (F36)				★			
MARC Honors Undergraduate Research Training (T34)							
MARC Predoctoral Fellowships (F31)		★					
Minority Biomedical Research Support Program (So6)		★		★			
Summer Institute in Research on Aging				★			

*Letters and numbers in parenthesis indicate NIH codes.

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■ Extramural Training Opportunities

National Research Service Awards (NRSA)

NRSA: Individual Postdoctoral Fellowship

NIH Code: F32

The Individual Postdoctoral Fellowship is offered by all NIH Institutes. It provides funding for up to 3 years of full-time research training for health scientists in areas that reflect the national need for biomedical, behavioral, and social research.

Eligibility: An applicant must have a Ph.D., Sc.D., M.D., or equivalent degree by the beginning date of the proposed fellowship and must have arranged to work with a particular sponsor affiliated with an institution that has the staff and facilities needed for the proposed training. Training may be undertaken abroad only if the site provides opportunities unavailable in the United States.

These grants are not intended for study leading to health professional degrees, nor do these awards support residency training. Applicants must be United States citizens, noncitizen nationals, or individuals who have been lawfully admitted to the United States for permanent residence.

Support: Stipend levels for 1993 range from \$18,600 to \$32,300 and are

determined by level of training and number of years of relevant postdoctoral experience at the time the award is made. Relevant experience may include research, teaching, internship, residency, or full-time study beyond the doctorate in a health-related field. An institutional allowance to help defray awardee expenses may be requested by the sponsoring institution. Recipients of these awards must fulfill payback provisions by which 1 year of research or teaching, or acceptable combination thereof, is required for less than 24 months of support.

Application: Applications must be submitted by April 5, August 5, or December 5 and are given expedited review by the DRG Study Sections. Earliest possible start dates related to the above receipt dates are September 1, January 1, May 1 respectively.

Further Information: For additional information about the Individual Postdoctoral Fellowship contact:

Training Officer
NIA Office of Extramural Affairs
7201 Wisconsin Avenue
Bethesda, Maryland 20892
Telephone: (301) 496-9322

NRSA: Senior Postdoctoral Fellowship

NIH Code: F33

The Senior Postdoctoral Fellowship permits experienced scientists to make major changes in the direction of their research careers, broaden their scientific background, and acquire new research capabilities. The award may be used in conjunction with a sabbatical.

Eligibility: Prior to receiving this fellowship an applicant must have at least 7 years of relevant postdoctoral research or professional training. Arrangements to work with a particular sponsor affiliated with an institution that has the staff and facilities for the proposed training are also a prerequisite to submitting an application. These grants are not intended for study leading to the Ph.D., M.D., or other professional degree, nor do these awards support residency training.

Senior fellowships may be awarded for a period of up to 2 years. Continued support beyond the first year is contingent upon the research training plan, satisfac-

tory progress, and the availability of funds. Fellows must be United States citizens, noncitizen nationals, or have been lawfully admitted to the United States for permanent residence.

Support: Stipends of up to \$32,300 per year must be commensurate with the salary the awardee would have received from the institution of permanent affiliation. Recipients are subject to the pay-back provision of the National Research Service Awards by which 1 year of research or teaching, or acceptable combination thereof, is required for less than 24 months of support.

Application: Applications must be submitted by April 5, August 5, or December 5 for an expedited DRG review cycle of approximately 6 months.

Further Information: For additional information about the Senior Postdoctoral Fellowship contact:

Training Officer
NIA Office of Extramural Affairs
7201 Wisconsin Avenue
Bethesda, Maryland 20892
Telephone: (301) 496-9322

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NRSA: Institutional Training Grant

NIH Code: T32

The Institutional Training Grant enables nonprofit graduate schools to offer predoctoral and postdoctoral research training opportunities. The training director at the institution is responsible for the selection of trainees and for the overall direction of the program.

Eligibility: United States graduate level educational institutions which have or are able to develop the staff and facilities required for the proposed program may apply. Prior to receiving the grant, predoctoral trainees must have received an appropriate baccalaureate degree, and postdoctoral fellows must have received a recognized doctoral degree (i.e., Ph.D., Sc.D., M.D.). These awards are not made for study leading to health professional degrees. Trainees must be United States citizens, noncitizen nationals, or have been lawfully admitted to the United States for permanent residence.

Support: Stipends in 1993 range from \$18,600 to \$32,300 for postdoctoral fellows per year, depending upon relevant

experience and training; the predoctoral stipend level is \$8,800 per year. Tuition and trainee travel, as well as institutional costs of up to \$1,500 per year/predoctoral and up to \$2,500 per year/postdoctoral, may be requested to defray costs of other training-related expenses. Tuition for postdoctoral trainees will be given only for specific courses. Postdoctoral trainees are subject to payback obligation for less than 24 months of support.

Application: Institutions should submit applications by January 10, May 10, or September 10, allowing approximately 10 months from receipt to start date. Applications are reviewed for technical merit by NIA review committees.

Further Information: For additional information about the Institutional Training Grant contact:

Training Officer
NIA Office of Extramural Affairs
7201 Wisconsin Avenue
Bethesda, Maryland 20892
Telephone: (301) 496-9322

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**NRSA: Geriatric Research
Institutional Training Award (GRIT)**

NIH Code: T32

The Geriatric Research Institutional Training Award is designed to strengthen the science base of geriatrics and gerontology by supporting intensive research training for physicians.

Eligibility: Applicant institutions must have an established clinical fellowship training program in geriatrics, qualified faculty to serve as mentors, and ongoing research activities to provide an adequate research environment. Candidates must be physicians who have completed 1 or more years of clinical geriatric fellowship training.

Support: Stipends in 1993 range from \$18,600 to \$32,300 per year for postdoctoral fellows depending upon the individual's experience and training. Applicant institutions may request support for two to six fellows per year. No more than six fellows will be supported by any institution in a yearly budget period.

Application: Institutions should submit applications by January 10, May 10, or September 10, allowing approximately 10 months from receipt to start date. Applications are reviewed for technical merit by NIA review committees.

Further Information: For additional information about the GRIT Award contact:

NIA Geriatrics Program
7201 Wisconsin Avenue
Bethesda, Maryland 20892
Telephone: (301) 496-6761



NRSA: Complementary Institutional Training Grant

NIH Code: T32

The Complementary Institutional Training Grant encourages established research training programs in disciplines related to aging to expand their efforts to include training for careers in aging research. It is designed to increase the number of investigators in both aging and related disciplines.

Eligibility: Institutions must have a well-established research training program in a field related to aging and have an NRSA Institutional Training Grant with 3 years remaining in the project period. The program director must be committed to giving more emphasis to research training in aging. Predoctoral trainees must have an appropriate baccalaureate degree. Postdoctoral fellows must have a recognized doctoral degree (i.e., Ph.D., Sc.D., M.D.) prior to the appointment. These awards are not made for study leading to health professional degrees. Trainees must be United States citizens, noncitizen nationals, or have been lawfully admitted to the United States for permanent residence.

Support: Stipends in 1993 range from \$18,600 to \$32,300 per year for postdoctoral fellows, depending upon relevant experience and training; the predoctoral stipend level is \$8,800 per year. Tuition and trainee travel, as well as institutional costs of up to \$1,500 per year/predoctoral and up to \$2,500 per year/postdoctoral, may be requested to defray costs of other training-related expenses. Tuition for postdoctoral trainees will be given only for specific courses. Postdoctoral trainees are subject to payback obligation for less than 24 months of support.

Application: Institutions should submit applications by January 10, May 10, or September 10, allowing approximately 10 months from receipt to start date. Applications are reviewed for technical merit by NIA review committees.

Further Information: For additional information about the Complementary Institutional Training Grant contact:

Training Officer
NIA Office of Extramural Affairs
7201 Wisconsin Avenue
Bethesda, Maryland 20892
Telephone: (301) 496-9322

Short-Term Training for Students in Health Professional Schools

NIH Code: T35

The Short-Term Training for Students in Health Professional Schools is an institutional award designed to interest students in research careers. Each participating health professional school develops an application that is best suited to its own strengths and characteristics. The institution's training program director must have a demonstrated record of success conducting research and working with research trainees.

Eligibility: Domestic health professional schools which have the staff and facilities required for the proposed program may apply. The training institution is responsible for the selection and appointment of trainees who are currently enrolled in accredited health professional schools. Trainees must be United States citizens,

noncitizen nationals, or have been lawfully admitted to the United States for permanent residence.

Support: Institutions may request up to 5 years of renewable support. The stipend for trainees is \$708 per month. Up to \$125 per month may be requested for each participating student to partially defray training-related expenses.

Application: Applications from institutions are accepted January 10 for awards to begin in the summer of the following year.

Further Information: For additional information about Short-Term Training contact:

Training Officer
NIA Office of Extramural Affairs
7201 Wisconsin Avenue
Bethesda, Maryland 20892
Telephone: (301) 496-9322

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Career Development Awards

Special Emphasis Research Career Award (SERCA)

NIH Code: K01

The Special Emphasis Research Career Award fosters career development in special areas by encouraging researchers to acquire in-depth experience and skills in specialized areas. The NIA currently funds SERCAs in five areas.

The Rehabilitation and Aging SERCA supports research and training in biomedical and psychosocial aspects of rehabilitation interventions.

The Behavioral Geriatrics SERCA supports established social and behavioral scientists for supplementary biomedical research training and interdisciplinary research experience.

The Nutritional SERCA supports research on nutritional and metabolic factors in aging, including epidemiologic, clinical, and physiologic studies.

The Otolaryngology SERCA supports the training and research of communication scientists or clinically trained individuals seeking careers in hearing research and other communication processes.

The Demography and Economics SERCA supports junior and mid-level investigators who have expertise in economics or demography to develop experience in aging research.

Eligibility: Candidates must have a Ph.D., D.Sc., M.D., or equivalent professional degree and at least 2 years of research experience when the award is activated. This award is appropriate for researchers at an early stage in their career as well as for mid-career researchers who have worked in other fields and wish to acquire expertise in the specialty area. Candidates must be citizens of the United States, noncitizen nationals, or have been lawfully admitted to the United States for permanent residence. An application for another Public Health Service career development award may not be submitted concurrently with the SERCA, but an application will be accepted simultaneously for a FIRST Award or regular research project grant.

Support: This nonrenewable award provides 5 years of support for full-time research and related activities. Salary, not to exceed \$50,000 annually plus fringe benefits, will be provided and must be consistent with the established salary structure of the grantee institution. The award also provides \$10,000 annually during the first 3 years and up to \$20,000 per year during the remaining 2 years for research costs including technical assistance, limited equipment, supplies, consultant costs, travel, and publication costs.

Application: Individuals should submit applications by February 1, June 1, or October 1, allowing approximately 10 months from receipt to start date. Applications are reviewed for technical merit by NIA review committees.

Further Information: For additional information about Career Development Awards and requests for supplemental guidelines contact:

Training Officer
NIA Office of Extramural Affairs
7201 Wisconsin Avenue
Bethesda, Maryland 20892
Telephone: (301) 496-9322

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Research Career Development Award (RCDA)

NIH Code: KO4

The Research Career Development Award is a special salary grant to enhance the research capability of individuals who, in the formative stages of their careers, have demonstrated outstanding potential as independent investigators in biomedical or behavioral research. The quality of their research must be such that applicants can be virtually free from teaching responsibilities, committee assignments, service or administrative duties which would not directly contribute to their research career development. These awards are offered by all NIH Institutes.

Eligibility: Candidates must have a recognized doctoral degree (Ph.D., Sc.D., or M.D.) and at least 5 years of subsequent relevant research experience, including 2 years as the principal investigator of an independent peer-reviewed research grant. An applicant must be a United States citizen, a noncitizen national, or have been lawfully admitted to the United States for permanent residence.

The Research Career Development Award is intended for investigators who demonstrate potential for independent research accomplishments. Candidates who are well established in their fields are ineligible.

Candidates must be nominated by a non-profit public or private institution. To be eligible, institutions must be engaged in health-related research and be located in the United States or its possessions and territories. The institution must guarantee that the candidate will be available full-time for research activities.

Support: This nonrenewable award provides a salary of up to \$50,000 per year plus fringe benefits for 5 years. At least 80 percent of the candidate's time must be spent in research; the other 20 percent may be spent on research-related activities. At the time of award, candidates must demonstrate that they have independent research support sufficient for the research proposed in the application.

Application: Individuals should submit applications by February 1, June 1, or October 1, allowing approximately 10 months from receipt to start date. Applications are reviewed for technical merit by DRG review committees.

Further Information: For additional information about the RCDA contact:

Training Officer
NIA Office of Extramural Affairs
7201 Wisconsin Avenue
Bethesda, Maryland 20892
Telephone: (301) 496-9322

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Geriatric Leadership Academic Award (GLAA)

NIH Code: K07

This award is designed for an academic leader who wishes to enhance aging research and research training programs at an applicant institution and further his or her own career. The awardee provides leadership and coordination by encouraging other faculty members to integrate aging issues into their research and teaching, organizing and conducting studies and courses focused on aging, developing resources for aging research and teaching, and linking related activities among and within various health professional schools. The institution's program should emphasize aging research from a range of disciplines.

Eligibility: The applicant must have an appropriate academic appointment at the institution at the time the award is activated, commit at least 50 percent effort to the proposed program, and have sufficient research and clinical experience in geriatrics and/or gerontology to be effective in developing and implementing the program. The applicant must be a United States citizen, noncitizen national, or have been lawfully admitted to the United States for permanent residence. The institution must provide the awardee

with time to acquire the skills necessary for personal development and for development of the program. Only one application per institution will be accepted.

Support: Awards are for up to 3 years and may be renewed once for 3 years after completing a satisfactory peer review. The awardee receives salary support up to \$50,000 annually plus fringe benefits. In addition, up to \$40,000 of additional costs for training, travel, supplies, and equipment may be requested.

Application: Individuals should submit applications by February 1, June 1, or October 1, allowing approximately 10 months from receipt to start date. Applications are reviewed for technical merit by NIA review committees.

Further Information: For additional information about the GLAA contact:

Training Officer
NIA Office of Extramural Affairs
7201 Wisconsin Avenue
Bethesda, Maryland 20892
Telephone: (301) 496-9322

or

NIA Geriatrics Program
7201 Wisconsin Avenue
Bethesda, Maryland 20892
Telephone: (301) 496-6761

Clinical Investigator Award (CIA)

NIH Code: Ko8

The Clinical Investigator Award provides an opportunity for clinically trained individuals to undertake 3, 4, or 5 years of preparation for careers as independent biomedical investigators in aging. Candidates should plan to investigate a well-defined problem, such as nutrition, immunology, pharmacology, adult-onset diabetes, dermatology, epidemiology, musculoskeletal problems, or osteoporosis, under a competent sponsor or sponsors. The award facilitates transition from postdoctoral training to a career as an independent investigator.

Eligibility: Individual awards are open to those with an M.D., D.D.S., or equivalent degree who are United States citizens, noncitizen nationals, or have been lawfully admitted to the United States for permanent residence. Ordinarily, those holding the Ph.D. are not eligible; nor are those who have been principal investigators on Public Health Service-supported research grants. Applicants must have no fewer than 3 years of postdoctoral experience. The grantee institution must be a domestic university, medical school, or comparable institution with a strong, well-established geriatric research program, a faculty with expertise in clinical and basic science, and a commitment to provide guidance to individuals in the development of research independence.

Support: The Clinical Investigator Award provides salary not to exceed \$50,000 annually, consistent with the established salary structure of the grantee institution. The award provides \$10,000 annually for related research expenses. Clinical Investigator awardees may subsequently apply for a FIRST Award or a research project grant. The award is nonrenewable, usually nontransferable, and is based on a full-time research effort.

Application: Individuals should submit applications by February 1, June 1, or October 1, allowing approximately 10 months from receipt to start date. Applications are reviewed for technical merit by NIA review committees.

Further Information: For additional information about the CIA contact:

Associate Director
NIA Geriatrics Program
7201 Wisconsin Avenue
Bethesda, Maryland 20892
Telephone: (301) 496-6761

or
Training Officer
NIA Office of Extramural Affairs
7201 Wisconsin Avenue
Bethesda, Maryland 20892
Telephone: (301) 496-9322

Academic Award

NIH Code: Ko8

The Academic Award prepares young physicians for careers in research and teaching with emphasis on geriatric medicine and related clinical disciplines. It bridges the period between postdoctoral study and a formal academic appointment.

Eligibility: An applicant must have an M.D., D.V.M., or equivalent degree. The award targets those who have completed or are in the final year of residency training or, in the basic sciences, are completing 3 years of postdoctoral training and experience and wish to become more skilled as teacher-investigators in a clinical research area. Ordinarily, neither those holding the Ph.D. nor those who have been principal investigators on PHS-supported research grants are eligible. The grantee institution must be a domestic university, medical school, or institution with suitable facilities for research. The sponsor must be a member of the senior faculty who will assist the candidate in developing an excellent career program. Awardees must be United States citizens, noncitizen nationals, or have been lawfully admitted to the United States for permanent residence.

Support: The Academic Award provides 5 years of salary support, not to exceed

\$50,000 annually, consistent with the established salary structure of the grantee institution. It also provides \$5,000 annually for related research expenses. The awardee is expected to devote full time to the proposed research, teaching, and related clinical activities. The award is non-renewable and is usually nontransferable. After the first or second year awardees are encouraged to apply for additional research support by submitting an application for a FIRST award or a research project grant.

Application: Individuals should submit applications by February 1, June 1, or October 1, allowing approximately 10 months from receipt to start date. Applications are reviewed for technical merit by NIA review committees.

Further Information: For additional information about the Academic Award contact:

Associate Director
NIA Geriatrics Program
7201 Wisconsin Avenue
Bethesda, Maryland 20892
Telephone: (301) 496-6761

or

Training Officer
NIA Office of Extramural Affairs
7201 Wisconsin Avenue
Bethesda, Maryland 20892
Telephone: (301) 496-9322

Physician Scientist Award/Program

NIH Codes: K11, K12

The Physician Scientist Award is a 5-year program. It encourages newly trained clinicians to develop independent research skills and experience in basic science. The award, which is restricted to those holding M.D. or other health professional degrees, helps support the transition from clinical training status to that of productive investigator. NIA encourages physicians who plan to pursue research careers to apply for the *individual* Physician Scientist Award.

Leaders in aging research who are experienced in the design and management of programs for developing investigators are encouraged to apply for the *program* Physician Scientist Award. The program director may recruit and select candidates into programs without submitting individual applications for each candidate.

Eligibility: Candidates should demonstrate competence in geriatric clinical activities and have a serious commitment to aging research. References and experience must provide evidence that the applicant has the potential to become an independent investigator. Candidates must hold a health professional degree in the clinical sciences (M.D., D.O., or equivalent) and have completed at least 1 year of postgraduate clinical training.

The awardees must be United States citizens, noncitizen nationals, or have been lawfully admitted to the United States for permanent residence.

Support: The award provides salary based on the institution's salary scale for residents of equivalent experience. Salaries may not exceed \$50,000 plus fringe benefits for full-time (75 to 100 percent) effort. For research support and tuition, up to \$10,000 may be requested in Phase I, increasing to \$20,000 in Phase II.

Application: Individuals should submit applications by February 1, June 1, or October 1, allowing approximately 10 months from receipt to start date. Applications are reviewed for technical merit by NIA review committees.

Further Information: For additional information about the Physician Scientist Award/Program contact:

Training Officer
NIA Office of Extramural Affairs
7201 Wisconsin Avenue
Bethesda, Maryland 20892
Telephone: (301) 496-9322

or
NIA Geriatrics Program
7201 Wisconsin Avenue
Bethesda, Maryland 20892
Telephone: (301) 496-6761

Geriatric Academic Program Award (GAP)

NIH Code: K12

The Geriatric Academic Program Award supports institutions in developing academic career programs in geriatrics. It strengthens the science base of geriatrics and gerontology and encourages collaboration among clinical, basic, epidemiologic, behavioral, and social researchers.

Eligibility: Applicant institutions must have a geriatric fellowship program and a strong base of research and clinical activities in geriatrics. Programs may be conducted at two or more institutions. Junior faculty must have a health professional degree in the clinical sciences (M.D., D.O., or equivalent) and have completed 1 year of fellowship training in geriatrics or been certified for "Added Qualifications in Geriatric Medicine."

Support: Awards provide junior faculty with up to \$50,000 per year salary support for 5 years and a limited amount for research expenses. For the first 3 years of the award, 10 percent of the sponsor's salary is provided. The award is limited to support eight candidates per year.

Application: Institutions should submit applications by February 1, June 1, or October 1, allowing approximately 10 months from receipt to start date. Applications are reviewed for technical merit by NIA review committees.

Further Information: For additional information about the GAP Award contact:

NIA Geriatrics Program
7201 Wisconsin Avenue
Bethesda, Maryland 20892
Telephone: (301) 496-6761

■ Special Programs

Minority Access to Research Careers Program (MARC)

NIH Codes: F34, F36, T34, F31

The Minority Access to Research Careers Program, established in 1975, is a unique research training support program administered by the National Institute of General Medical Sciences (NIGMS) in collaboration with the NIA and other NIH components. The primary goals of the MARC program are to increase the number and capabilities of minority scientists engaged in biomedical research and to strengthen science curricula and research opportunities at minority institutions in order to prepare students for careers in biomedical research. The program funds the following institutional research training grants and individual fellowships.

Faculty Fellowships (F34) provide opportunities for selected faculty of 4-year colleges, universities, and health professional schools with substantial minority enrollment to pursue Ph.D. degrees and to obtain postdoctoral research training in the biomedical sciences.

Visiting Scientist Fellowships (F36) provide financial support to outstanding scientists-teachers to serve as visiting scientists at minority institutions to strengthen the biomedical sciences research and teaching programs at these institutions.

Honors Undergraduate Research Training Grants (T34) are aimed at increasing the number of minority students who can compete successfully for Ph.D. degrees in the biomedical sciences and at developing strong science curricula and research opportunities at minority schools.

Predoctoral Fellowships (F31) provide support for research training leading to the Ph.D. degree in the biomedical sciences for selected students who are graduates of the MARC Honors Undergraduate Research Training Program. Support for individuals not enrolled in the MARC program is also available for under-represented minority students through a different NIGMS program.

Eligibility: Applicants must be United States citizens, noncitizen nationals, or have been lawfully admitted to the United States for permanent residence.

Further Information: For additional information and applications for MARC programs contact:

MARC Program
Westwood Building, Room 950
Bethesda, Maryland 20892
Telephone: (301) 594-7823

Minority Biomedical Research Support Program (MBRS)

NIH Code: So6

The Minority Biomedical Research Support Program supports faculty research projects involving minority student participation in biomedical research. Awards are made to schools with high minority enrollments. The program was established to further the NIH's commitment toward ensuring ethnic minority groups an equal opportunity to pursue careers in biomedical research. MBRS goals are to increase the number of minority health scientists and to strengthen the capability of eligible minority institutions to provide science career opportunities for their students and to conduct research in the health sciences.

Eligibility: To be eligible for a grant under this program, an institution must be located in a State or an American territory, offer undergraduate, graduate, or health professional degrees, and have a student enrollment with a significant

proportion of ethnic minorities. Awards are competitive and are restricted to ethnic minority institutions.

Support: Through institutional awards, the MBRS program provides for academic year and summer salaries for faculty, students, and support personnel needed to conduct a research project. Other cost categories supported include equipment, supplies, travel, and alterations and renovations.

Further Information: For additional information about the Minority Biomedical Research Support Program contact:

MBRS Program
NIH National Center for Research Resources
Westwood Building, Room 10a11
Bethesda, Maryland 20892
Telephone: (301) 594-7947

**Summer Institute
in Research on Aging**

The NIA Summer Institute offers new researchers an intensive 1-week exposure to issues and challenges in research on aging.

Eligibility: Applications are accepted from individuals with an M.D., Ph.D., or equivalent degree who have no more than 3 years of postdoctoral or postresidency experience in biological, clinical, or behavioral sciences. Selections are based on previous training, career objectives, and references.

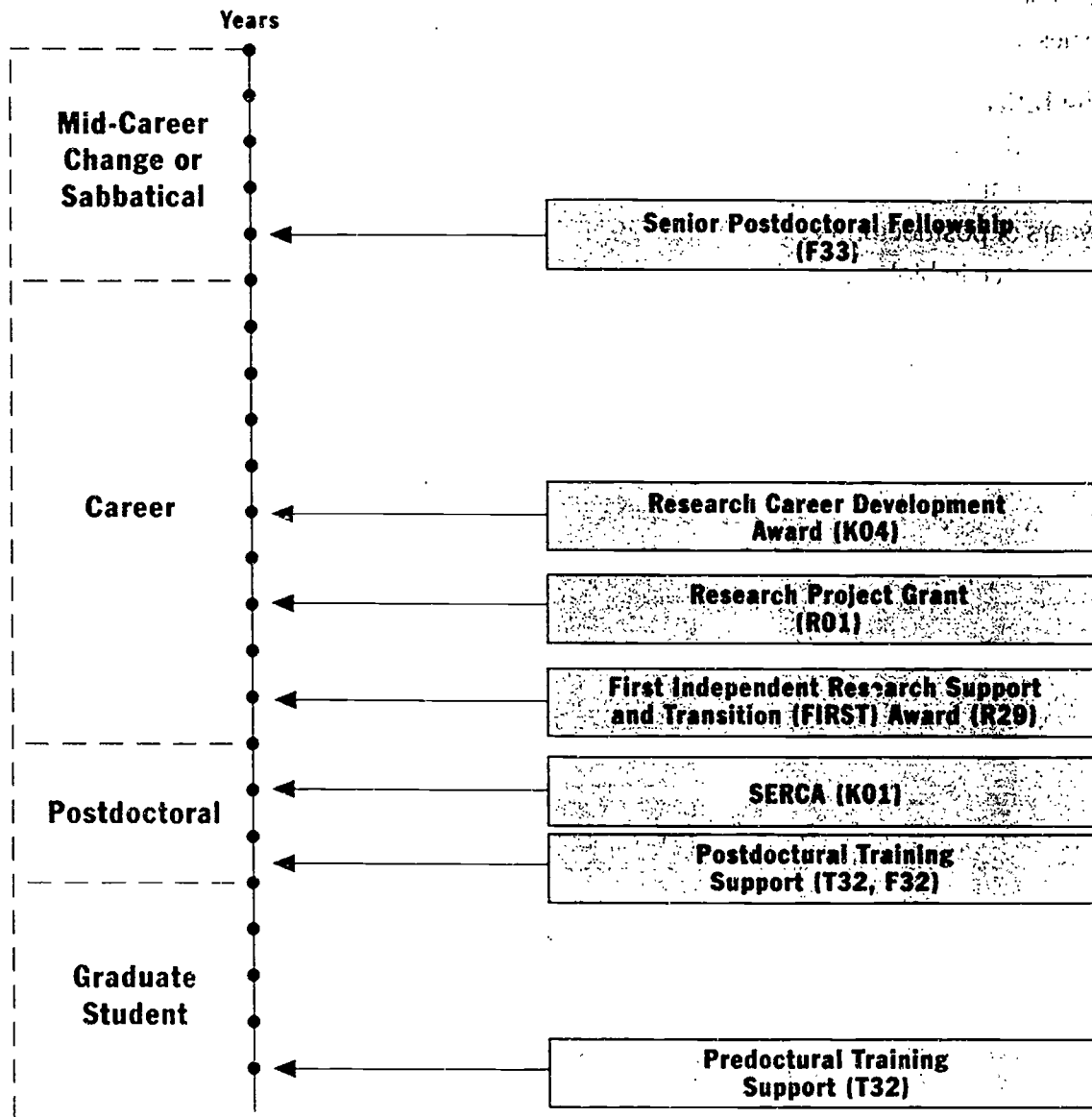
Further Information: For additional information and application forms for the Summer Institute in Research on Aging contact:

NIA Office of Special Programs
Building 31, Room 5C35
Bethesda, Maryland 20892
Telephone: (301) 496-0765

Extramural Research Training and Development: Graduate Student

Stages of Research Training and Development

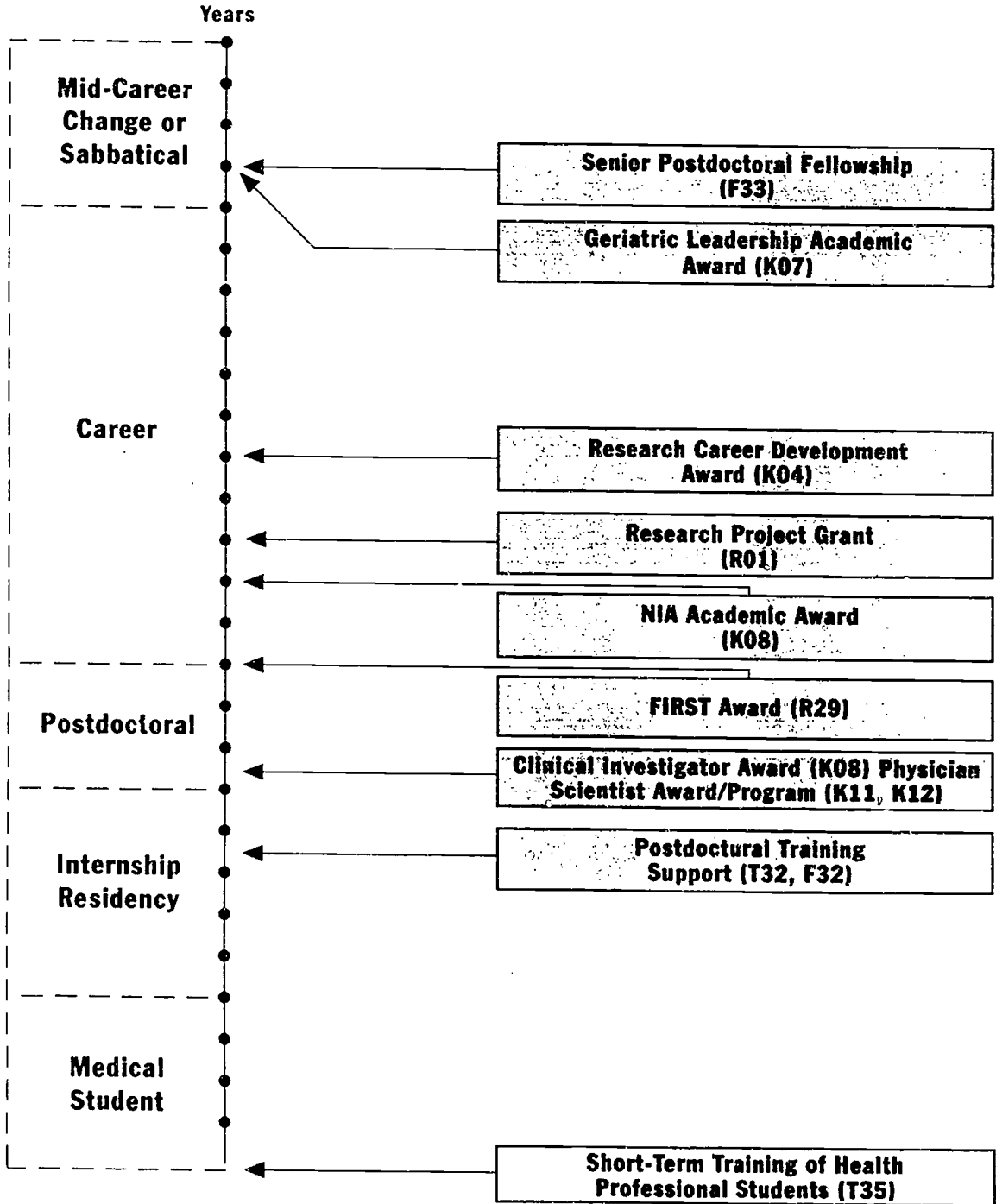
Mechanism of Support



Extramural Research Training and Development: Medical Student

Stages of Research Training and Development

Mechanism of Support





U.S. DEPARTMENT OF
HEALTH AND HUMAN SERVICES
Public Health Service
National Institutes of Health



National Institute on Aging

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