

DEPARTMENT OF HEALTH AND HUMAN SERVICES

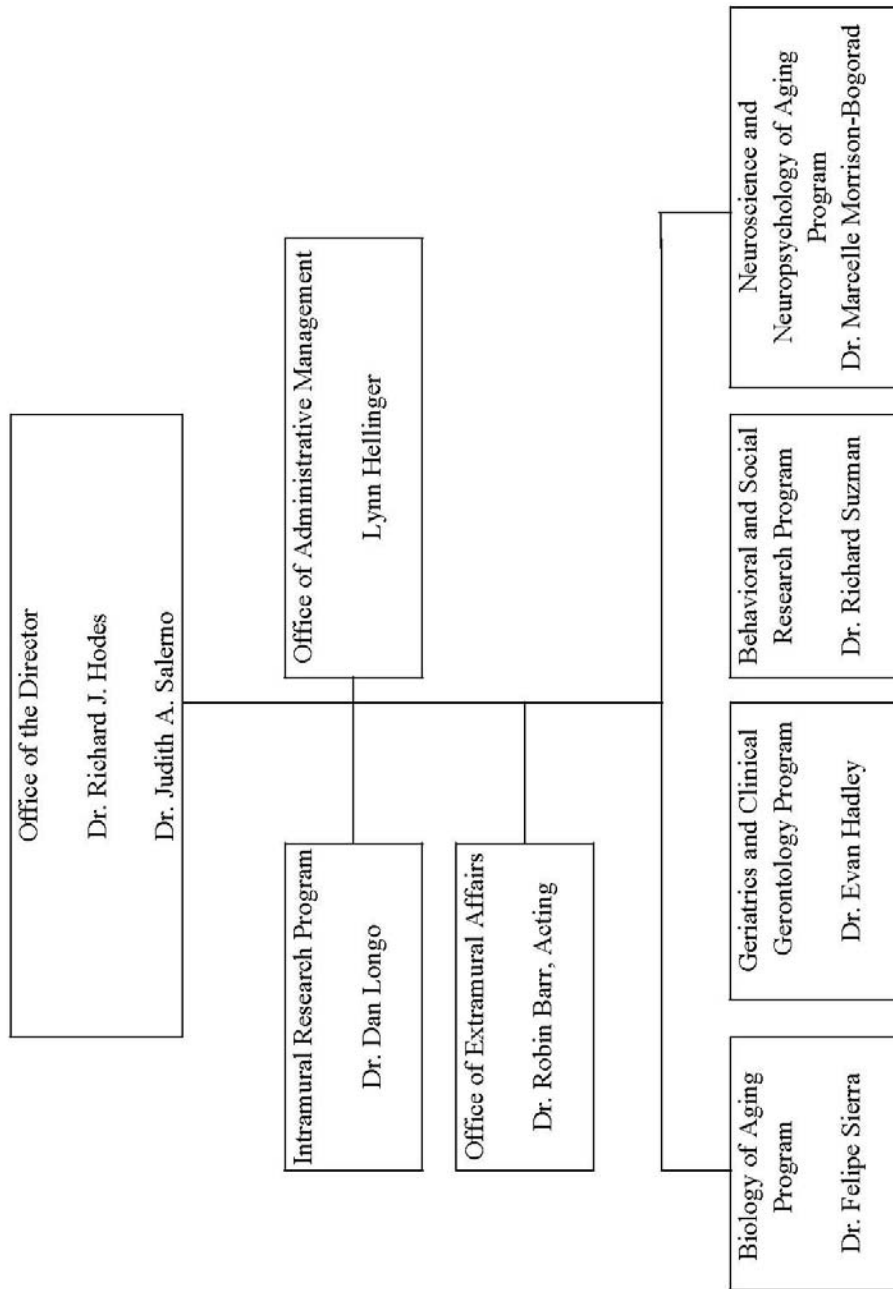
NATIONAL INSTITUTES OF HEALTH

National Institute on Aging

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**NATIONAL INSTITUTES OF HEALTH
National Institute on Aging**

Organizational Structure



FY 2008 Proposed Appropriation Language

NATIONAL INSTITUTES OF HEALTH

National Institute on Aging

*For carrying out Section 301 and title IV of the Public Health Service Act with respect to aging,
\$1,047,148,000.*

Supplementary Exhibit

**Comparison of Proposed FY 2008 Appropriation Language to
Most Recently Enacted Full-Year Appropriations**

NATIONAL INSTITUTES OF HEALTH

National Institute on Aging

For carrying out section 301 and title IV of the Public Health Services Act with respect to Aging
[~~\$1,057,203,000~~]**\$1,047,148,000** Department of Health and Human Services Appropriation Act,
2006.

**National Institutes of Health
National Institute on Aging**

Amounts Available for Obligation 1/

Source of Funding	FY 2006 Actual	FY 2007 Continuing Resolution	FY 2008 Estimate
Appropriation	\$1,057,203,000	\$1,046,631,000	\$1,047,148,000
Enacted Rescissions	-10,572,000	0	0
Subtotal, Adjusted Appropriation	1,046,631,000	1,046,631,000	1,047,148,000
Real Transfer under Roadmap Authority	-9,353,000		
Real Transfer under Secretary's one-percent transfer authority	-719,000		
Comparative transfer from OD for NIH Roadmap	9,353,000		
Comparative Transfer to NIBIB	-61,000	-63,000	
Comparative transfer to OD	-27,000	-28,000	
Comparative Transfer to NCRR	-620,000	-666,000	
Comparative Transfer to the Office of the Assistant Secretary for Admin. And Mgmt. and to the Office of the Assistant Secretary for Public Affairs	-3,000	-3,000	
Subtotal, adjusted budget authority	1,045,201,000	1,045,871,000	1,047,148,000
Unobligated balance, start of year	0	0	0
Unobligated balance, end of year	0	0	0
Subtotal, adjusted budget authority	1,045,201,000	1,045,871,000	1,047,148,000
Unobligated balance lapsing	0	0	0
Total obligations	1,045,201,000	1,045,871,000	1,047,148,000

1/ Excludes the following amounts for reimbursable activities carried out by this account:
FY 2006 - \$4,127,000 FY 2007 - \$4,158,000 FY 2008 - \$4,158,000
Excludes \$16,326,000 in FY 2007 and \$25,142,000 in FY 2008 for royalties.

NATIONAL INSTITUTES OF HEALTH

National Institute on Aging

(Dollars in Thousands)

Budget Mechanism - Total

MECHANISM	FY 2006 Actual		FY 2007 Continuing Resolution		FY 2008 Estimate		Change	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Research Grants:								
<u>Research Projects:</u>								
Noncompeting	1,058	\$506,805	1,085	\$508,045	1,080	\$496,921	-5	-11,124
Administrative supplements	(115)	13,904	(114)	7,150	(114)	7,000	0	-150
Competing:								
Renewal	84	59,078	83	58,375	89	62,545	6	4,170
New	317	85,397	313	84,085	334	89,676	21	5,591
Supplements	8	1,922	7	1,680	8	1,906	1	226
Subtotal, competing	409	146,397	403	144,140	431	154,127	28	9,987
Subtotal, RPGs	1,467	667,106	1,488	659,335	1,511	658,048	23	-1,287
SBIR/STTR	75	24,977	75	25,213	74	24,750	-1	-463
Subtotal, RPGs	1,542	692,083	1,563	684,548	1,585	682,798	22	-1,750
<u>Research Centers:</u>								
Specialized/comprehensive	74	82,378	74	81,966	74	81,966	0	0
Clinical research	0	0	0	0	0	0	0	0
Biotechnology	0	0	0	0	0	0	0	0
Comparative medicine	0	646	0	428	0	428	0	0
Research Centers in Minority Institutions	0	0	0	0	0	0	0	0
Subtotal, Centers	74	83,024	74	82,394	74	82,394	0	0
<u>Other Research:</u>								
Research careers	204	26,408	210	26,856	217	27,486	7	630
Cancer education	0	0	0	0	0	0	0	0
Cooperative clinical research	0	0	0	0	0	0	0	0
Biomedical research support	0	0	0	0	0	0	0	0
Minority biomedical research support	0	1,323	0	1,316	0	1,316	0	0
Other	26	5,212	30	5,185	0	5,185	-30	0
Subtotal, Other Research	230	32,943	240	33,357	217	33,987	-23	630
Total Research Grants	1,846	808,050	1,877	800,299	1,876	799,179	-1	-1,120
<u>Research Training:</u>	<u>FTEs</u>		<u>FTEs</u>		<u>FTEs</u>			
Individual awards	52	2,378	55	2,528	55	2,528	0	0
Institutional awards	482	20,676	482	20,776	482	20,776	0	0
Total, Training	534	23,054	537	23,304	537	23,304	0	0
Research & development contracts (SBIR/STTR)	109 (0)	63,987 (55)	108 (0)	68,830 (117)	108 (0)	70,318 (117)	0 0	1,488 0
	<u>FTEs</u>		<u>FTEs</u>		<u>FTEs</u>		<u>FTEs</u>	
Intramural research	246	102,525	249	102,080	251	101,370	2	-710
Research management and support	132	38,232	132	38,806	135	39,194	3	388
Cancer prevention & control	0	0	0	0	0	0	0	0
Construction		0		0		0		0
Buildings and Facilities		0		0		0		0
NIH Roadmap for Medical Research	0	9,353	0	12,552	0	13,783		1,231
Total, NIA	378	1,045,201	381	1,045,871	386	1,047,148	5	1,277

NATIONAL INSTITUTES OF HEALTH
National Institute on Aging
Budget Authority by Program
(Dollars in thousands)

	FY 2004 Actual		FY 2005 Actual		FY 2006 Actual		FY 2006 Comparable		FY 2007 Continuing Resolution		FY 2008 Estimate		Change	
	FTEs	Amount	FTEs	Amount	FTEs	Amount	FTEs	Amount	FTEs	Amount	FTEs	Amount	FTEs	Amount
Extramural Research														
Detail:														
Biology of Aging Program		\$176,003		\$179,852		\$176,245		\$176,123		\$175,600		\$175,672		\$72
Behavioral & Social Research Program		170,654		168,514		169,400		169,283		168,780		168,850		70
Neuroscience & Neuropsychology of Aging Program		401,190		420,056		414,477		414,190		412,960		413,131		171
Geriatrics & Clinical Gerontology Program		140,725		139,851		135,589		135,495		135,093		135,148		55
Subtotal, Extramural		888,572		908,273		895,711		895,091		892,433		892,801		368
Intramural research	264	99,455	244	102,805	246	102,607	246	102,525	249	102,080	251	101,370	2	-710
Res. management & support	145	33,349	122	34,261	132	38,241	132	38,232	132	38,806	135	39,194	3	388
NIH Roadmap for Medical Research		3,519		6,651		9,353		9,353		12,552		13,783	0	1,231
TOTAL	409	1,024,895	366	1,051,990	378	1,045,912	378	1,045,201	381	1,045,871	386	1,047,148	5	1,277

NATIONAL INSTITUTES OF HEALTH
National Institute on Aging

Major Changes in the Fiscal Year 2008 Budget Request

Major changes by budget mechanism and/or budget activity detail are briefly described below. Note that there may be overlap between budget mechanism and activity detail and these highlights will not sum to the total change for the FY 2008 budget request for NIA, which is \$1,277,000 more than the FY 2007 Continuing Resolution, for a total of \$1,047,148,000.

Research Project Grants (-\$1,750,000; total \$682,798,000): NIA will support a total of 1,511 Research Project Grant (RPG) awards in FY 2008. Noncompeting RPGs will decrease by 5 awards and \$11,124,000. Competing RPGs will increase by 28 awards and \$9,987,000. NIA will follow the NIH policy of providing no inflationary increases for both non-competing and competing projects.

Research Careers (+\$630,000; total \$27,486,000): NIA will support the NIH Pathway to Independence program by funding an additional 7 awards in FY 2008. Total support for the Pathway program in FY 2008 is 14 awards and \$1,260,000. The goal of this program is to nurture a vibrant, creative, research workforce, including sufficient numbers of new investigators with new ideas and new skills.

Research and Development Contracts (+\$1,488,000; total \$70,318,000): NIA will continue to expand its support for the Trans NIH Neuroscience blueprint (+\$669,000), which was inspired by recognition that unifying themes in neuroscience research are fundamental to understanding the normal and disordered nervous system and to developing better prevention and treatment therapies. In addition, support for NIH and DHHS activities funded under program evaluation will be expanded (+\$819,000)

Intramural Research (-\$710,000; total \$101,370,000): NIA will work to identify areas of potential savings within the Intramural Research Program that will allow the institute to continue to achieve its program goals and accomplishments.

Research Management and Support (+\$388,000; total \$39,194,000): The NIA oversees almost 1,900 research grants and more than 500 full-time training positions and 100 research and development contracts. The increase will be used to partially offset the expenses associated with pay raises and other inflationary cost increases necessary to provide for the effective administrative, planning and evaluation, public information and communications, and scientific leadership of the institute.

NIH Roadmap for Biomedical Research (+\$1,231,000; total \$13,783,000): NIA will continue its support of the NIH Roadmap, an incubator for new ideas and initiatives that will accelerate the pace of discovery in FY 2008.

NATIONAL INSTITUTES OF HEALTH
National Institute on Aging

Summary of Changes

FY 2007 Continuing Resolution				\$1,045,871,000
FY 2008 Estimated Budget Authority				1,047,148,000
Net change				1,277,000
CHANGES	FY 2007		Change from Base	
	FTEs	Budget Authority	FTEs	Budget Authority
A. Built-in:				
1. Intramural research:				
a. Annualization of January 2007 pay increase		\$39,771,000		\$262,000
b. January 2008 pay increase		39,771,000		895,000
c. Two extra days of pay		39,771,000		306,000
d. Payment for centrally furnished services		12,888,000		129,000
e. Increased cost of laboratory supplies, materials, and other expenses		49,421,000		1,074,000
Subtotal				2,666,000
2. Research Management and Support:				
a. Annualization of January 2007 pay increase		\$17,150,000		\$113,000
b. January 2008 pay increase		17,150,000		386,000
c. Two extra days of pay		17,150,000		132,000
d. Payment for centrally furnished services		5,560,000		56,000
e. Increased cost of laboratory supplies, materials, and other expenses		16,096,000		339,000
Subtotal				1,026,000
Subtotal, Built-in				3,692,000

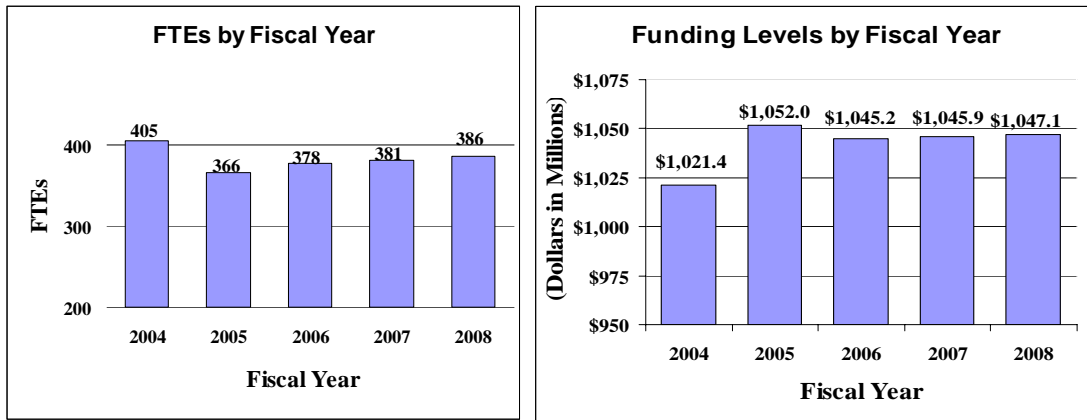
NATIONAL INSTITUTES OF HEALTH
National Institute on Aging

Summary of Changes--continued

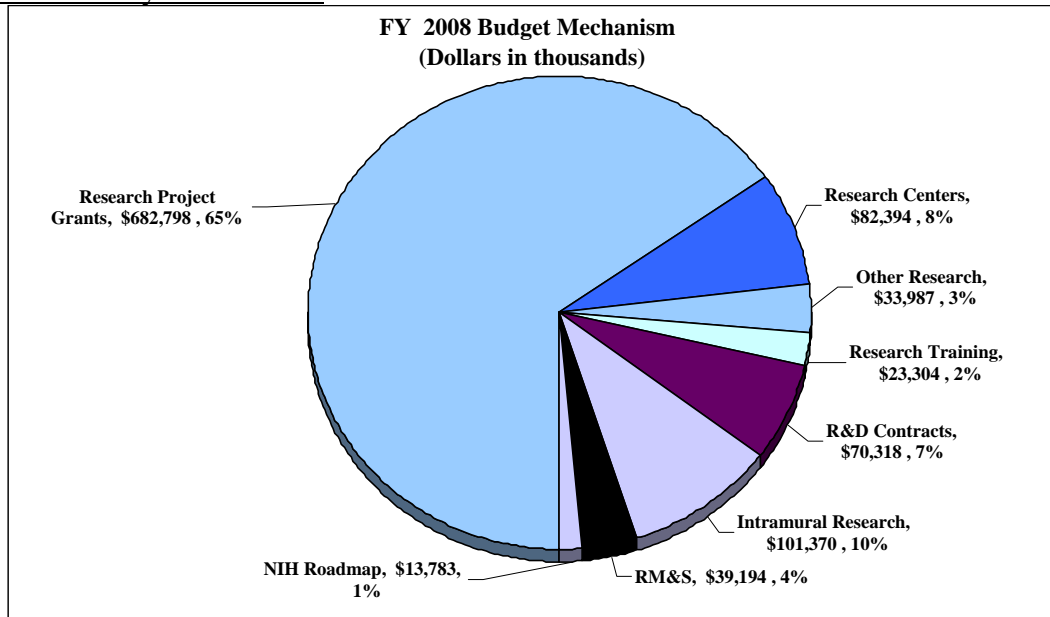
CHANGES	FY 2007			
	Continuing Resolution		Change from Base	
	No.	Amount	No.	Amount
B. Program:				
1. Research project grants:				
a. Noncompeting	1,085	\$515,195,000	(5)	(\$11,274,000)
b. Competing	403	144,140,000	28	9,987,000
c. SBIR/STTR	75	25,213,000	(1)	(463,000)
Total	1,563	684,548,000	22	(1,750,000)
2. Research centers	74	82,394,000	0	0
3. Other research	240	33,357,000	(23)	630,000
4. Research training	537	23,304,000	0	0
5. Research and development contracts	108	68,830,000	0	1,488,000
Subtotal, extramural				368,000
	<u>FTEs</u>		<u>FTEs</u>	
6. Intramural research	249	102,080,000	2	(3,376,000)
7. Research management and support	132	38,806,000	3	(638,000)
8. NIH Roadmap for Medical Research	0	12,552,000	0	1,231,000
Subtotal, program		1,045,871,000		(2,415,000)
Total changes	381		5	1,277,000

Fiscal Year 2008 Budget Graphs

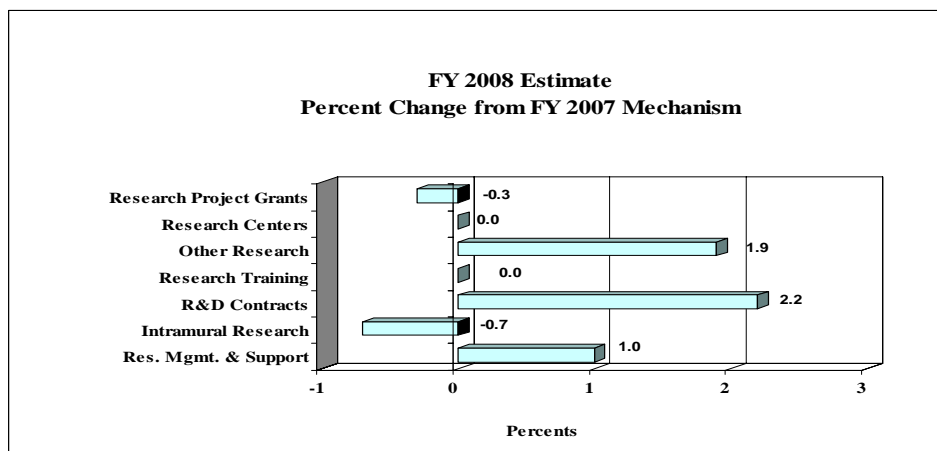
History of Budget Authority and FTEs:



Distribution by Mechanism:



Change by Selected Mechanism:



Justification National Institute on Aging

Authorizing Legislation: Section 301 and title IV of the Public Health Service Act, as amended.

Budget Authority:

FY 2006		FY 2007		FY 2008		Increase or	
Actual		Continuing Resolution		Estimate		Decrease	
<u>FTE</u>	<u>BA</u>	<u>FTE</u>	<u>BA</u>	<u>FTE</u>	<u>BA</u>	<u>FTE</u>	<u>BA</u>
378	\$1,045,201,000	381	\$1,045,871,000	386	\$1,047,148,000	+5	+\$1,277,000

This document provides justification for the Fiscal Year (FY) 2008 activities of the National Institute on Aging (NIA), including NIH/AIDS activities. Details of the FY 2008 HIV/AIDS activities are in the “Office of AIDS Research (OAR)” section of the Overview. Details on the Roadmap/Common Fund are located in the Overview, Volume One.

Director’s Overview

There are currently 35 million Americans over the age of 65. Of these, more than four million are over 85, and some 65,000 have attained their hundredth birthday. By 2030, the number of individuals age 65 and older will likely double, reaching 70.3 million and comprising a larger proportion of the entire population, rising from 13 percent today to 20 percent in 2030, and the number of the “oldest old” – people age 85 and older – is expected to grow from 4.3 million in 2000 to at least 19.4 million by 2050.¹

As life expectancy increases, we are challenged to find ways to keep the additional years of life free of disease and disability. Today, more than half of all Americans over age 65 show evidence of osteoarthritis in at least one joint.² Over half of Americans older than 50 have osteoporosis or low bone mass.³ Cardiovascular disease, cancer, and diabetes remain common among older Americans, and as many as 4.5 million Americans suffer from Alzheimer’s disease (AD).⁴ For many, modern medicine and new insights into lifestyle and other environmental influences are allowing people to remain healthy and socially and emotionally vital into very advanced ages; however, NIA supported research continues to address the needs of the growing number of people who will live longer.

The National Institute on Aging (NIA) leads a national scientific effort to understand the nature of aging and to extend the healthy, active years of life for all Americans. NIA achieves its mission through a robust extramural research program composed of the four research areas as described in the Budget Justification section plus a vibrant intramural research program.

¹ Federal Interagency Forum on Aging Related Statistics. *Older Americans 2000: Key Indicators of Well-Being*. 2000.

² See “Handout on Health: Osteoarthritis,” National Institute of Arthritis and Musculoskeletal and Skin Diseases, July 2002.

³ See *America’s Bone Health: The State of Osteoporosis and Low Bone Mass in Our Nation*. National Osteoporosis Foundation, February 2002.

⁴ Hebert LE et al.: Alzheimer disease in the U.S. population: Prevalence estimates using the 2000 Census. *Arch. Neurol.* 60: 1119-22, 2003.

NIA's research programs cover a wide range of topics critical to understanding aging and its interaction with the initiation and progression of disease and disability. For example, NIA research has identified lifestyle factors and health behaviors that directly influence physical and mental fitness and risk of disease in aging populations. NIA-supported scientists develop and refine recommendations for people of all ages regarding optimal diet, dietary supplement use, exercise, and safety to increase their likelihood of enjoying a physically and mentally healthy old age. Other researchers work to find better ways to enhance the physical, mental, and interpersonal capabilities of older people and to expand opportunities for them to achieve personal goals and contribute to society in meaningful ways. Still others explore the molecular, cellular, and genetic changes that take place in the body as we age, with the ultimate goal of developing new prevention strategies and novel therapeutic approaches to eliminate or delay the debilitating physical, cognitive, and psychological changes that can occur.

As the research on aging advances, NIA will focus more effort on the translation of basic research findings into clinical studies and trials. The institute supports large multidisciplinary programs in translational research, including:

- Edward R. Roybal Centers for Research on Applied Gerontology, designed to advance promising social and behavioral basic research findings from the laboratory and into programs, practices, and policies to improve the lives of older people and enhance the capacity of the nation to adapt to the societal shifts that come with an aging population.
- Claude D. Pepper Older American Independence Centers (OAIC), established to increase scientific knowledge for the development of innovative and cost-effective ways to maintain and restore independence.
- The Alzheimer's Disease Translational Initiative, a major effort to encourage more researchers to move from basic research on Alzheimer's disease and associated disorders into translational research and drug testing in clinical trials. Components of this initiative include program announcements on drug discovery and preclinical development and a program of toxicology services for academic and small business investigators who believe they have promising compounds for the treatment or prevention of Alzheimer's disease but lack the resources to perform the required toxicology studies.

Additional translational research efforts include:

- Recent findings which have shown that overweight, aged male mice whose high-calorie diet was supplemented with the natural compound resveratrol had better health and longer survival than their counterparts who did not receive it. NIA plans to test the effects of dietary supplementation with resveratrol in non-human primates, an important step to inform the consideration of human clinical trials.
- Several studies which suggest that physical exercise may prevent physical disability, including impaired mobility, in healthy and frail older adults. To develop definitive evidence, NIA and grantee researchers have developed the LIFE (Lifestyle Interventions and Independence in Elders) study, a clinical trial testing the effects of a physical activity program vs. a health education program among older Americans. A successful pilot study

(LIFE-P) completed in 2005 showed both feasibility and positive preliminary data, permitting design and consideration of this large-scale clinical trial.

- A large body of research in animal models which indicates that substantially reducing caloric intake while maintaining optimal nutrition results in significant increase in life span. NIA-supported Comprehensive Assessment of Long-Term Effects of Reducing Intake of Energy (CALERIE) will help to determine if these beneficial effects extend to humans. Results from pilot studies demonstrated that overweight people who cut their calories by 25 percent for six months have reduced fasting insulin levels and core body temperature, two markers that may be associated with increased longevity in humans. A longer-term study will begin in January 2007.

NIA's Intramural Research Program is very active in the translation of basic research findings to clinical studies. One of its primary resources, the Advanced Studies in Translational Research on Aging (ASTRA) unit, is a state-of-the-art facility located at Baltimore's Harbor Hospital. ASTRA, opened in January 2003, is equipped with a fully functional 10-bed acute care inpatient unit, an outpatient examination and treatment unit, and other resources vital to the conduct of translational research. Recently, the Baltimore Longitudinal Study of Aging, which has been the gold-standard reference for all epidemiological studies on aging, was moved to the ASTRA unit where NIA plans to launch a number of ancillary studies that are more likely to provide information that can be directly applied to clinical medicine.

Overall Budget Policy

Investigator-initiated research projects and new investigator research and career development are the Institute's highest priorities. In order to maximize the number of competing research project grants that can be made, NIA has a cap on the amount that can be awarded to individual program project awards and is following the NIH policy in providing no inflationary increases for non-competing or competing grants. In addition, the NIA has targeted a portion of the funds available for competing research project grants to support high priority projects outside of the payline, including awards to new investigators and first-time renewals. The Institute also seeks to maintain a balance between solicitations issued to the extramural community in areas that need stimulation and funding made available to support investigator-initiated projects.

Narrative by Program

Biology of Aging Program: Understanding Aging Processes, Health, and Longevity

Investigators supported by NIA's Biology of Aging Program (BAP) seek to better understand the basic biochemical, genetic, and physiological mechanisms that underlie the process of aging and age-related changes in humans and in animal models. BAP supports research on age-related changes in structure and function, from the molecular and cellular level to entire organisms, as well as the ways in which these changes are related to diseases and conditions common to aging. This program supports integrated research on genetics and other aspects of aging-related changes in multiple model systems, including both mammals and non-mammalian organisms (e.g. flies, worms, and yeast).

Budget Policy: The 2008 budget estimate for the Biology of Aging Program is \$175,672,000, an increase of \$72,000 or 0.04 percent from the FY 2007 Continuing Resolution of \$175,600,000. Program objectives for FY 2008 include plans to:

- *Continue the search for interventions that extend the lifespan.* The recent finding that resveratrol could affect the health and survival of mammals exemplifies the promise of this research. An important component in this area is the Intervention Testing Program, which supports the testing of compounds with the potential to extend the lifespan and delay disease and dysfunction in a mouse model. Plans are to renew this promising initiative in FY 2007 for funding in FY 2008.
- *Continue to search for genes and biological pathways that influence longevity and aging.* NIA's primary mechanism for this endeavor is the Longevity Associated Gene initiative, which to date has identified over one hundred new longevity-associated genes, along with many conserved biological processes and pathways that regulate longevity in a host of divergent species, including humans.
- *Increase our understanding of the aging immune system.* A new initiative on "Membrane Associated Signaling Defects in Immune Cells with Aging" seeks to shed light on the cellular processes that may lead to impaired immune function in older people.
- *Understand the role of nuclear receptors in aging.* Research supported under two complementary program announcements will focus on the biologic mechanisms that underlie the activity of nuclear receptors, which are molecules that play key roles in various physiologic and pathophysiologic processes, including those involved in aging and in age-related diseases.
- *Continue the highly successful Nathan Shock Centers of Excellence in Basic Biology of Aging.* These centers enhance the ability of institutions with well-developed research programs in basic research on aging to use state-of-the-art research resources to provide the strongest environment for the conduct of research on aging.

Behavioral and Social Research Program:

Understanding and Addressing the Behavioral, Emotional, and Social Dynamics of Aging

NIA Behavioral and Social Research Program (BSR) supports social and behavioral research to better understand the processes of aging at both the individual and societal level. Research areas include the behavioral, emotional, and social changes individuals undergo throughout the adult lifespan; interrelationships between older people and social institutions; and the societal impact of the changing age composition of the population. BSR also supports research training, development of research resources, and a knowledge base for the development of interventions to maximize active life and health expectancy.

Budget Policy: The 2008 budget estimate for the Behavioral and Social Research Program is \$168,850,000, an increase of \$70,000 or 0.04 percent from the FY 2007 Continuing Resolution of \$168,780,000. Program plans for FY 2008 are to:

- *Initiate a new wave of the National Long-Term Care Survey (NLTCs) and continue other major demographic studies.* The NLTCs is a longitudinal survey to study changes in the health and functional status of older Americans and track health expenditures; Medicare services used; and the availability of personal, family, and community resources for caregiving. It is considered one of the most useful resources for analyzing national disability trends. Other important ongoing studies include the Health and Retirement Survey and collaborations with the Census Bureau and the Federal Forum on Aging.
- *Support research initiatives to address financial challenges faced by American elders.* Funding for two major initiatives in this area will run through FY 2008. One initiative, “Developing Integrated Economic Models of Health Retirement,” will stimulate development of comprehensive econometric models of retirement from the labor force. The other focuses on the neuroeconomics of aging and supports research to examine the social, emotional, cognitive, motivational processes and neurobiological mechanisms of decision-making behavior in older people.
- *Support research on ways in which data from ongoing clinical trials and other studies can be used to plan and prepare for future natural and man-made disasters.* Three coordinated research solicitations focused on behavioral and social aspects of disasters were released in 2006 to stimulate research on the consequences of natural and man-made disasters and their effects on the health of vulnerable groups, with the-ultimate goal of preventing and/or mitigating harmful consequences.

Neuroscience and Neuropsychology of Aging:

Understanding, Preventing, and Treating Cognitive Decline and Disability

NIA’s Neuroscience and Neuropsychology of Aging (NNA) Program supports a broad spectrum of research and training aimed at better understanding age-related normal and pathological changes in the structure and function of the nervous system and how such changes affect behavior. The basic mission is to expand knowledge on the aging nervous system to allow improvement in the quality of life of older people. This includes basic and clinical studies of the nervous system, clinical trials of treatments and preventive interventions for neurological disease, and epidemiological research to identify risk factors and to establish prevalence and incidence estimates of pathologic conditions. Additionally, it supports research relevant to those geriatric problems arising from psychiatric and neurologic disorders associated with aging.

Budget Policy: The 2008 budget estimate for Neuroscience and Neuropsychology of Aging Program is \$413,131,000, an increase of \$171,000 or 0.04 percent from the FY 2007 Continuing Resolution of \$412,960,000. Program plans for FY 2008 are to:

- *Continue to support high-quality research on Alzheimer’s disease (AD).* Alzheimer’s disease is a major public health issue for the United States because of its enormous impact on individuals, families, the health care system, and society as a whole. NIA supports a robust portfolio that encompasses all areas of AD research, from the disease’s molecular underpinnings to cutting-edge diagnostic and treatment modalities. NIA will continue a comprehensive drug development program and pilot trials initiative plus a cooperative agreement with the University of California, San Diego to conduct several

new clinical trials of interventions to treat AD through the Alzheimer's Disease Cooperative Study. (See the "program portrait.")

- *Support research on maintenance of cognitive and emotional health into older age.* NIA joined with the National Institute of Mental Health and the National Institute on Neurological Disorders and Stroke to launch the Cognitive and Emotional Health Project, which is designed to assess the state of longitudinal and epidemiological research on demographic, social, and biologic determinants of cognitive and emotional health in aging adults and the pathways by which cognitive and emotional health may reciprocally influence each other. A "Cognitive Health Summit" planned for Spring 2007 will inform future research in this area.
- *Develop new tools, resources, and training opportunities to accelerate the pace of discovery in neuroscience research through participation in the NIH Blueprint for Neuroscience Research.* NIA is one of fifteen NIH Institutes that participate in the Blueprint, designed to enhance collaboration through coordinated initiatives. The first Blueprint initiatives began in FY 2005. The priority in FY 2007 is neurodegeneration with neurodevelopment the priority in FY 2008.
- *Continue research on neurological diseases and conditions other than AD that occur in older Americans, including Parkinson's disease, frontotemporal dementia (FTD), and amyotrophic lateral sclerosis (ALS).* This research is an important component of NIA's portfolio. NIA-supported researchers recently identified a misfolded protein that is common to FTD and ALS, which provides important insights about the mechanisms of both diseases.

Program Portrait: Alzheimer's Disease Research

FY 2007 level: \$503,160,000

FY 2008 level: \$503,660,000

Change: \$ 500,000

Alzheimer's disease (AD) is the most common cause of dementia among people age 65 and older. Scientists estimate that as many as 4.5 million Americans suffer with the disease, and this number is expected to increase almost three-fold by 2050.⁵ Research into the causes, detection, diagnosis, treatment, and prevention of AD is a major priority for the National Institute on Aging (NIA). In fact, since its inception in 1974, NIA has dedicated the majority of its research budget to the study of AD and AD-related processes.

NIA supports AD-related research through both investigator-initiated projects and targeted initiatives such as the Alzheimer's disease Neuroimaging Initiative (ADNI), a five-year study that is the most comprehensive effort to date to identify brain and other biological changes associated with memory decline. The goal of the AD Genetics Initiative advances the search for genes associated with AD. A large, widely-available bank of genetic material, cell lines, and data from families with multiple members with late-onset AD has accelerated NIA's efforts to identify these genes. Discovery of risk factor genes will help illuminate the underlying disease processes of AD, open up novel areas of research, and identify new targets for drug therapy. NIA also launched a major AD drug discovery effort, complemented by a pilot clinical trials program. This research initiative seeks to stimulate preclinical research in the discovery, design, development and testing of novel compounds aimed at slowing, halting, or even reversing the progressive decline in cognitive function and modifying the behavioral symptoms in

⁵ Hebert, op. cit.

Alzheimer's disease as well as delaying the onset of or preventing AD. In addition, the institute currently supports some 25 AD clinical trials. Finally, NIA facilitates the dissemination of the latest information about AD through its Alzheimer's Disease Education and Referral (ADEAR) center, which has provided accurate, up-to-date information concerning AD to health professionals, people with AD and their families, and the general public since 1990. These activities, along with NIA's ongoing program of investigator-initiated research in AD, will continue through FY 2008.

In October 2006, NIA held a major scientific meeting to discuss future directions for the NIH Alzheimer's disease research agenda, with particular attention to research issues that need to be addressed in order to improve diagnosis and treatment of AD. This meeting brought together internationally-recognized experts in the field, and the results will inform NIA's research agenda in AD over the next few years.

Geriatrics and Clinical Gerontology Program: Reducing Disease and Disability Among Older People

As we age, our risk for many other types of disease and/or disability increases dramatically. NIA's Geriatrics and Clinical Gerontology (GCG) Program supports research on health, disease, and disability in the aged (other than neurodegeneration, which is the focus of the NNA Program). Areas of focus include age-related physical changes and their relationship to health outcomes, the maintenance of health and the development of disease, and specific age-related risk factors for disease. The program also plans and administers clinical trials.

Budget Policy: The 2008 budget estimate for the Geriatrics and Clinical Gerontology Program is \$135,148,000, an increase of \$55,000 or 0.04 percent from the FY 2007 Continuing Resolution of \$135,093,000. Program objectives for FY 2008 include plans to:

- *Initiate studies of venous and arterial thrombosis in the elderly.* Advanced age is associated with a dramatic increase in venous and arterial thrombosis (the development of dangerous blood clots in the veins and arteries). However, the biologic mechanisms for this increased risk are poorly understood. A new initiative will explore the biological mechanisms, epidemiology, pathophysiology, and clinical aspects (diagnosis, treatment, and prevention) of this common condition.
- *Continue clinical trials of the efficacy and safety of testosterone in older men for a variety of conditions.* Two trials are targeted to begin in mid-2007 – one for men over 65 and one for younger men. The trials are expected to run for approximately six years. Participants will include men who are experiencing clinical symptoms related to low testosterone levels. Although these are treatment studies, the results may inform future prevention trials.
- *Continue research on anemia in the elderly.* Anemia is common among older people; however, over half the cases of anemia in older adults occur without a clearly identifiable cause. An ongoing program supports research to better understand the epidemiology, pathophysiology, and clinical aspects of anemia in the elderly. Findings from this research may prove critical to the development of clinical trials.

Intramural Research at NIA

NIA's Intramural Research Program (IRP) includes the scientific disciplines of biochemistry, cell and molecular biology, structural biology, genetics, immunology, neurogenetics, behavioral sciences (psychology, cognition, and psychophysiology), epidemiology, statistics, and clinical research and the medical disciplines of neurobiology, immunology, endocrinology, cardiology, rheumatology, hematology, oncology, and gerontology. The program seeks to understand the changes associated with healthy aging and to define the criteria for evaluating when a change becomes pathologic. Studies focus on both common age-related diseases (e.g., Alzheimer's disease, Parkinson's disease, stroke, atherosclerosis, osteoarthritis, diabetes, cancer) and the determinants of healthy aging.

In 2008, NIA's IRP will celebrate the 50th anniversary of the Baltimore Longitudinal Study of Aging, America's longest-running scientific study of human aging. More than 1,400 men and women, ranging in age from the 20s to the 90s, have been study volunteers. Since its inception in 1958, the BLSA has generated numerous findings to elucidate the normal course of aging and disentangle the effects of disease from the normal aging process.

Budget Policy: The 2008 budget estimate for NIA's Intramural Research Program is \$101,370,000, a decrease of \$710,000 or 0.7 percent from the FY 2007 Continuing Resolution of \$102,080,000. Program objectives for FY 2008 include plans to:

- *Determine the effectiveness of already available therapeutic agents for prevention in models of heart disease.* Animal studies suggest that the compound fenoterol, widely used for treatment of pulmonary disease, may be effective in the treatment of congestive heart failure. Other studies in animal models have shown that the drug erythropoietin, used to treat certain types of anemia, has a protective effect on the heart if administered shortly after a heart attack. NIA's IRP is conducting preclinical testing of both agents with the goal of moving them into human clinical trials in future years.
- *Continue to study the effects of obesity and sarcopenia on health outcomes.* The Health, Aging, and Body Composition (Health ABC) Study is an ongoing study of body composition and weight-related health conditions. Clinical examinations will end in 2007, at which time NIA plans to initiate five years of focused event follow-up for physical and cognitive function, selected disease endpoints (fracture, heart disease, cancer, and stroke), cause-of-death assessment, and maintenance of the biorepository.
- *Continue to study the driving factors behind persistent black-white health disparities in overall longevity, cardiovascular disease, and cerebrovascular disease.* NIA is in the midst of data collection for its ground-breaking Healthy Aging in Neighborhoods of Diversity Across the Life Span (HANDLS) study. HANDLS is a community-based, epidemiological study for evaluating health disparities in socioeconomically diverse African American and white populations in Baltimore, Maryland.

Research Management Support

NIA RMS activities provide administrative, budgetary, logistical, and scientific support in the review, award, and monitoring of research grants, training awards and research and development

contracts. RMS functions also encompass strategic planning, coordination, and evaluation of the Institute's programs, regulatory compliance, international coordination, and liaison with other Federal agencies, Congress, and the public. The Institute currently oversees more than 1,840 research project grants and centers, as well as more than 500 full-time training positions and 100 research and support contracts.

Budget Policy: The 2008 budget estimate for NIA's Research Management and Support is \$39,194,000, an increase of \$388,000 or 1.0 percent over the FY 2007 Continuing Resolution of \$38,806,000. Additional funds will be used to partially offset the costs associated with pay raises and other mandatory increases.

NATIONAL INSTITUTES OF HEALTH

National Institute on Aging

Budget Authority by Object

	FY 2007 Continuing Resolution	FY 2008 Estimate	Increase or Decrease
Total compensable workyears:			
Full-time employment	381	386	5
Full-time equivalent of overtime & holiday hours	1	1	0
Average ES salary	\$165,402	\$169,769	\$4,367
Average GM/GS grade	11.5	11.5	0.0
Average GM/GS salary	\$82,174	\$84,343	\$2,169
Average salary, grade established by act of July 1, 1944 (42 U.S.C. 207)	\$93,256	\$95,718	\$2,462
Average salary of ungraded positions	105,606	108,394	2,788
OBJECT CLASSES	FY 2007 Estimate	FY 2008 Estimate	Increase or Decrease
Personnel Compensation:			
11.1 Full-Time Permanent	\$24,167,000	\$25,451,000	\$1,284,000
11.3 Other than Full-Time Permanent	10,920,000	11,500,000	580,000
11.5 Other Personnel Compensation	1,006,000	1,059,000	53,000
11.7 Military Personnel	547,000	576,000	29,000
11.8 Special Personnel Services Payments	9,410,000	9,683,000	273,000
Total, Personnel Compensation	46,050,000	48,269,000	2,219,000
12.0 Personnel Benefits	10,480,000	11,037,000	557,000
12.2 Military Personnel Benefits	391,000	412,000	21,000
13.0 Benefits for Former Personnel	0	0	0
Subtotal, Pay Costs	56,921,000	59,718,000	2,797,000
21.0 Travel & Transportation of Persons	1,369,000	1,383,000	14,000
22.0 Transportation of Things	228,000	231,000	3,000
23.1 Rental Payments to GSA	0	0	0
23.2 Rental Payments to Others	0	0	0
23.3 Communications, Utilities & Miscellaneous Charges	797,000	806,000	9,000
24.0 Printing & Reproduction	390,000	394,000	4,000
25.1 Consulting Services	874,000	883,000	9,000
25.2 Other Services	11,405,000	7,743,000	(3,662,000)
25.3 Purchase of Goods & Services from Government Accounts	73,906,000	74,819,000	913,000
25.4 Operation & Maintenance of Facilities	7,479,000	7,554,000	75,000
25.5 Research & Development Contracts	41,430,000	41,999,000	569,000
25.6 Medical Care	421,000	426,000	5,000
25.7 Operation & Maintenance of Equipment	1,975,000	1,995,000	20,000
25.8 Subsistence & Support of Persons	0	0	0
25.0 Subtotal, Other Contractual Services	137,490,000	135,419,000	(2,071,000)
26.0 Supplies & Materials	9,940,000	9,980,000	40,000
31.0 Equipment	2,577,000	2,598,000	21,000
32.0 Land and Structures	0	0	0
33.0 Investments & Loans	0	0	0
41.0 Grants, Subsidies & Contributions	823,603,000	822,832,000	(771,000)
42.0 Insurance Claims & Indemnities	0	0	0
43.0 Interest & Dividends	4,000	4,000	0
44.0 Refunds	0	0	0
Subtotal, Non-Pay Costs	976,398,000	973,647,000	(2,751,000)
NIH Roadmap for Medical Research	12,552,000	13,783,000	1,231,000
Total Budget Authority by Object	1,045,871,000	1,047,148,000	1,277,000

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Salaries and Expenses

OBJECT CLASSES	FY 2007 Continuing Resolution	FY 2008 Estimate	Increase or Decrease
Personnel Compensation:			
Full-Time Permanent (11.1)	\$24,167,000	\$25,451,000	\$1,284,000
Other Than Full-Time Permanent (11.3)	10,920,000	11,500,000	580,000
Other Personnel Compensation (11.5)	1,006,000	1,059,000	53,000
Military Personnel (11.7)	547,000	576,000	29,000
Special Personnel Services Payments (11.8)	9,410,000	9,683,000	273,000
Total Personnel Compensation (11.9)	46,050,000	48,269,000	2,219,000
Civilian Personnel Benefits (12.1)	10,480,000	11,037,000	557,000
Military Personnel Benefits (12.2)	391,000	412,000	21,000
Benefits to Former Personnel (13.0)	0	0	0
Subtotal, Pay Costs	56,921,000	59,718,000	2,797,000
Travel (21.0)	1,369,000	1,383,000	14,000
Transportation of Things (22.0)	228,000	231,000	3,000
Rental Payments to Others (23.2)	0	0	0
Communications, Utilities and Miscellaneous Charges (23.3)	797,000	806,000	9,000
Printing and Reproduction (24.0)	390,000	394,000	4,000
Other Contractual Services:			
Advisory and Assistance Services (25.1)	287,000	290,000	3,000
Other Services (25.2)	11,405,000	7,743,000	(3,662,000)
Purchases from Govt. Accounts (25.3)	42,787,000	43,040,000	253,000
Operation & Maintenance of Facilities (25.4)	7,479,000	7,554,000	75,000
Operation & Maintenance of Equipment (25.7)	1,975,000	1,995,000	20,000
Subsistence & Support of Persons (25.8)	0	0	0
Subtotal Other Contractual Services	63,933,000	60,622,000	(3,311,000)
Supplies and Materials (26.0)	9,900,000	9,940,000	40,000
Subtotal, Non-Pay Costs	76,617,000	73,376,000	(3,241,000)
Total, Administrative Costs	133,538,000	133,094,000	(444,000)

**NATIONAL INSTITUTES OF HEALTH
National Institute on Aging**

Authorizing Legislation

	PHS Act/ Other Citation	U.S. Code Citation	2007 Amount Authorized	FY 2007 Continuing Resolution	2008 Amount Authorized	FY 2008 Budget Estimate
Research and Investigation	Section 301	P.L. 109-482	Indefinite	\$1,045,871,000	Indefinite	\$1,047,148,000
National Institute on Aging	Section 41B	P.L. 109-482	Indefinite		Indefinite	
Total, Budget Authority				1,045,871,000		1,047,148,000

a/ Amounts authorized by Section 301 and Title IV of the Public Health Act.

NATIONAL INSTITUTES OF HEALTH
National Institute on Aging

Appropriations History

Fiscal Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation <u>1/</u>
1999	554,391,000 <u>2/ 3/</u>	565,574,000	596,521,000	596,521,000
Rescission	0	0	0	-395,000
2000	612,599,000 <u>2/</u>	651,665,000	680,332,000	690,156,000
Rescission				-3,667,000
2001	721,651,000 <u>2/</u>	790,299,000	794,625,000	786,039,000
Rescission				-285,000
2002	879,961,000	873,186,000	909,174,000	893,443,000
Rescission				-313,000
2003	958,155,000	958,155,000	1,000,099,000	1,000,099,000
Rescission				-6,501,000
2004	994,411,000	994,411,000	1,031,411,000	1,024,598,000
Rescission				-6,557,000
2005	1,055,666,000	1,055,666,000	1,094,500,000	1,060,666,000
Rescission				-8,676,000
2006	1,057,203,000	1,057,203,000	1,090,600,000	10,567,203,000
Rescission				-10,572,000
2007	1,039,828,000	1,039,828,000	1,039,828,000	1,039,828,000 <u>4/</u>
2008	1,047,148,000			

1/ Reflects enacted supplementals, rescissions, and reappropriations.

2/ Excludes funds for HIV/AIDS research activities consolidated in the NIH Office of AIDS Research

3/ Reflects a decrease of \$1,679,000 for the budget amendment for Bioterrorism

4/ Annualized current rate

NATIONAL INSTITUTES OF HEALTH
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Details of Full-Time Equivalent Employment (FTEs)

OFFICE/DIVISION	FY 2006 Actual	FY 2007 Continuing Resolution	FY 2008 Estimate
Office of the Director	23	23	23
Intramural Research Program	246	249	251
Office of Administrative Management	31	31	31
Office of Extramural Affairs	25	25	25
Biology of Aging Program	12	12	13
Geriatrics & Clinical Gerontology Program	12	12	12
Behavioral & Social Research Program	12	12	13
Neuroscience & Neuropsychology of Aging Program	17	17	18
Total	378	381	386
FTEs supported by funds from Cooperative Research and Development Agreements			
	(0)	(0)	(0)
FISCAL YEAR	Average GM/GS Grade		
2004	10.9		
2005	10.9		
2006	11.5		
2007	11.5		
2008	11.5		

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Detail of Positions

GRADE	FY 2006 Actual	FY 2007 Continuing Resolution	FY 2008 Estimate
Total, ES Positions	3	3	3
Total, ES Salary	483,445	507,617	532,998
GM/GS-15	34	34	34
GM/GS-14	28	28	28
GM/GS-13	39	39	39
GS-12	64	64	64
GS-11	41	41	41
GS-10	1	1	1
GS-9	32	32	32
GS-8	12	12	12
GS-7	18	18	18
GS-6	6	6	6
GS-5	2	2	2
GS-4	0	0	0
GS-3	0	0	0
GS-2	0	0	0
GS-1	0	0	0
Subtotal	277	277	277
Grades established by Act of July 1, 1944 (42 U.S.C. 207):			
Assistant Surgeon General	0	0	0
Director Grade	5	5	5
Senior Grade	0	0	0
Full Grade	0	0	0
Senior Assistant Grade	0	0	0
Assistant Grade	0	0	0
Subtotal	5	5	5
Ungraded	110	92	92
Total permanent positions	304	304	304
Total positions, end of year	395	395	395
Total full-time equivalent (FTE) employment, end of year	378	381	386
Average ES salary	161,148	165,402	169,769
Average GM/GS grade	11.5	11.5	11.5
Average GM/GS salary	80,060	82,174	84,343

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New Positions Requested

Position	FY 2008		
	Grade	Number	Annual Salary
Health Scientist Administrator	13	3	\$261,000
Investigator	13	2	174,000
Total Requested		5	