

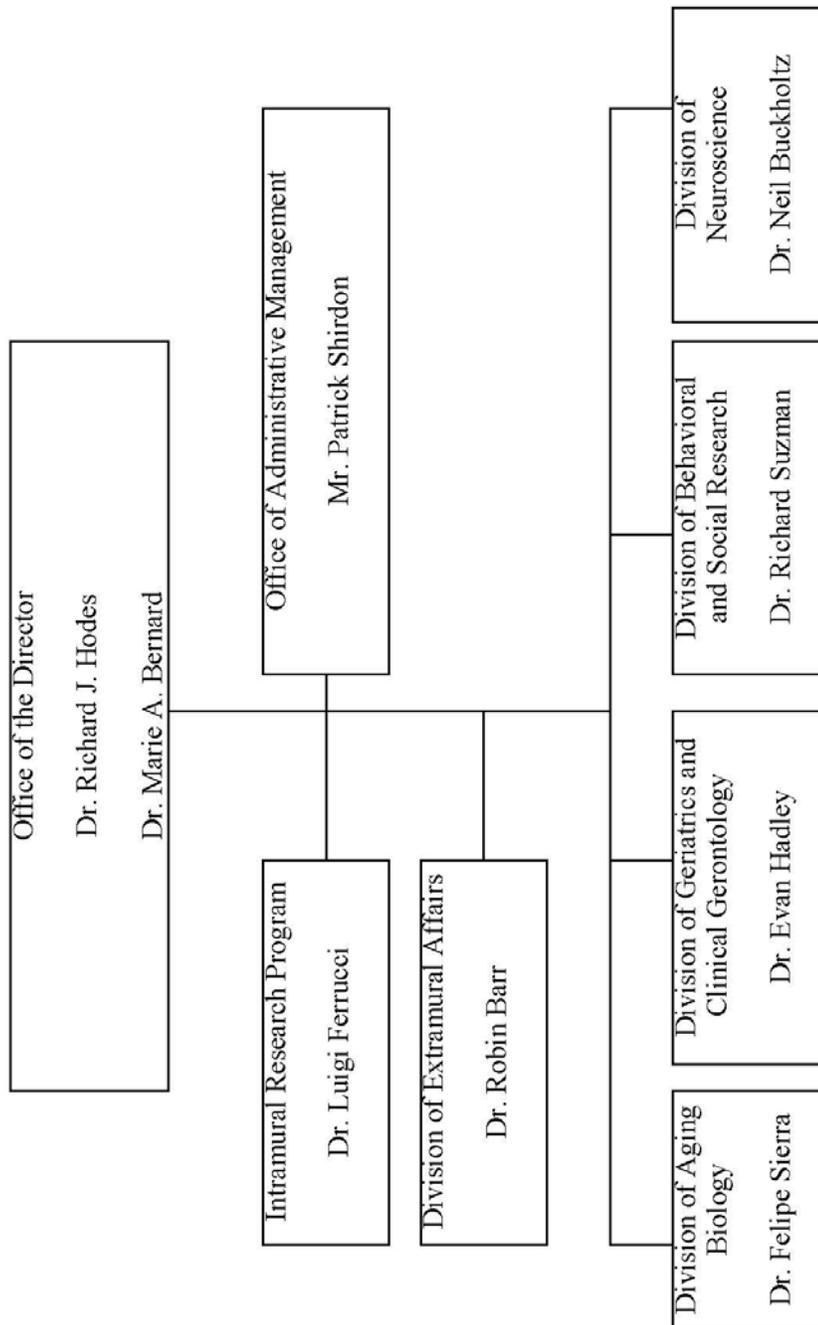
DEPARTMENT OF HEALTH AND HUMAN SERVICES  
NATIONAL INSTITUTES OF HEALTH

National Institute on Aging (NIA)

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

Organizational Structure



NATIONAL INSTITUTES OF HEALTH

National Institute on Aging

For carrying out section 301 and title IV of the PHS Act with respect to aging,

~~[\$1,171,038,000]~~ *\$1,170,880,000.*

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

**Amounts Available for Obligation<sup>1</sup>**  
(Dollars in Thousands)

Source of Funding	FY 2013 Actual	FY 2014 Enacted	FY 2015 President's Budget
Appropriation	\$1,103,441	\$1,171,038	\$1,170,880
Type 1 Diabetes	0	0	0
Rescission	-2,207	0	0
Sequestration	-55,385	0	0
Subtotal, adjusted appropriation	\$1,045,849	\$1,171,038	\$1,170,880
FY 2013 Secretary's Transfer	-6,101	0	0
OAR HIV/AIDS Transfers	0	0	0
Comparative transfers to NLM for NCBI and Public Access	-1,235	-1,611	0
National Children's Study Transfers	887	0	0
Subtotal, adjusted budget authority	\$1,039,399	\$1,169,427	\$1,170,880
Unobligated balance, start of year	0	0	0
Unobligated balance, end of year	0	0	0
Subtotal, adjusted budget authority	\$1,039,399	\$1,169,427	\$1,170,880
Unobligated balance lapsing	-69	0	0
Total obligations	\$1,039,330	\$1,169,427	\$1,170,880

<sup>1</sup> Excludes the following amounts for reimbursable activities carried out by this account:

FY 2013 - \$7,424    FY 2014 - \$7,425    FY 2015 - \$7,425

**NATIONAL INSTITUTES OF HEALTH**  
**National Institute on Aging**  
**Budget Mechanism - Total<sup>1</sup>**

(Dollars in Thousands)

MECHANISM	FY 2013 Actual		FY 2014 Enacted <sup>2</sup>		FY 2015 President's Budget		FY 2015 +/- FY 2014	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount
<u>Research Projects:</u>								
Noncompeting	984	\$498,055	952	\$509,065	980	\$520,364	28	\$11,299
Administrative Supplements	(79)	10,715	(80)	11,000	(80)	11,000	(0)	0
<u>Competing:</u>								
Renewal	58	50,809	62	54,047	63	25,872	1	-28,175
New	303	96,772	388	199,692	378	214,282	-10	14,590
Supplements	4	1,559	4	1,500	4	1,500	0	0
Subtotal, Competing	365	\$149,140	454	\$255,239	445	\$241,654	-9	-\$13,585
Subtotal, RPGs	1,349	\$657,911	1,406	\$775,304	1,425	\$773,018	19	-\$2,286
SBIR/STTR	66	26,876	80	32,449	82	33,442	2	993
Research Project Grants	1,415	\$684,787	1,486	\$807,753	1,507	\$806,460	21	-\$1,293
<u>Research Centers:</u>								
Specialized/Comprehensive	78	\$81,648	58	\$78,092	59	\$80,319	1	\$2,227
Clinical Research	0	0	0	0	0	0	0	0
Biotechnology	0	0	0	0	0	0	0	0
Comparative Medicine	0	1,040	0	1,040	0	1,040	0	0
Research Centers in Minority Institutions	0	0	0	0	0	0	0	0
Research Centers	78	\$82,688	58	\$79,132	59	\$81,359	1	\$2,227
<u>Other Research:</u>								
Research Careers	195	\$26,026	198	\$27,360	194	\$27,360	-4	\$0
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	0	0	0	0	0	0	0
Other	49	7,626	45	9,247	45	9,247	0	0
Other Research	244	\$33,652	243	\$36,607	239	\$36,607	-4	\$0
Total Research Grants	1,737	\$801,127	1,787	\$923,492	1,805	\$924,426	18	\$934
<u>Ruth L Kirchstein Training Awards:</u>	<u>FTTPs</u>		<u>FTTPs</u>		<u>FTTPs</u>		<u>FTTPs</u>	
Individual Awards	170	\$6,729	175	\$6,924	174	\$6,993	-1	\$69
Institutional Awards	389	16,121	400	16,588	399	16,754	-1	166
Total Research Training	559	\$22,849	575	\$23,512	573	\$23,747	-2	\$235
Research & Develop. Contracts	103	\$58,645	103	\$58,189	103	\$59,800	0	\$1,611
<i>(SBIR/STTR) (non-add)</i>	<i>(2)</i>	<i>(177)</i>	<i>(2)</i>	<i>(305)</i>	<i>(2)</i>	<i>(305)</i>	<i>(0)</i>	<i>(0)</i>
Intramural Research	236	115,235	236	118,577	236	119,763	0	1,186
Res. Management & Support	159	41,543	159	42,717	159	43,144	0	427
<i>Res. Management &amp; Support (SBIR Admin) (non-add)</i>	<i>(0)</i>	<i>(0)</i>	<i>(0)</i>	<i>(0)</i>	<i>(0)</i>	<i>(0)</i>	<i>(0)</i>	<i>(0)</i>
Construction		0		0		0		0
Buildings and Facilities		0		0		0		0
Total, NIA	395	\$1,039,399	395	\$1,169,427	395	\$1,170,880	0	\$1,453

<sup>1</sup> All items in italics and brackets are non-add entries. FY 2013 and FY 2014 levels are shown on a comparable

<sup>2</sup> The amounts in the FY 2014 column take into account funding reallocations, and therefore may not add to the total budget authority reflected herein.

## **Major Changes in the Fiscal Year 2015 President's Budget Request**

Major changes by budget mechanism and/or budget activity detail are briefly described below. Note that there may be overlap between budget mechanisms and activity detail and these highlights will not sum to the total change for the FY 2015 President's Budget for NIA, which is \$1.453 million more than the FY 2014 level, for a total of \$1,170.880 million.

### Research Project Grants (-\$1.293 million; total \$806.460 million):

NIA will award a total of 1,507 RPGs, an increase of 21 from FY 2014. NIA intends to fund several large grants in FY 2014. Funds would then be available in FY 2015 for competing RPG awards.

### Intramural Research (+\$1.186 million; total \$119.763 million):

NIA will continue 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 (+\$0.427 million; total \$43.144 million):

The NIA oversees 1,805 research grants, 573 full-time training positions, and 103 research and development contracts. Funding will be used to cover the expenses associated with providing for the effective, administrative, planning and evaluation, public information and communications, and scientific leadership of the institute.

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

**Summary of Changes<sup>1</sup>**

(Dollars in Thousands)

<b>FY 2014 Enacted</b>				\$1,169,427
<b>FY 2015 President's Budget</b>				\$1,170,880
<b>Net change</b>				\$1,453
<b>CHANGES</b>	<b>FY 2015 President's Budget</b>		<b>Change from FY 2014</b>	
	<b>FTEs</b>	<b>Budget Authority</b>	<b>FTEs</b>	<b>Budget Authority</b>
A. Built-in:				
1. Intramural Research:				
a. Annualization of January 2014 pay increase & benefits		\$42,851		\$191
b. January FY 2015 pay increase & benefits		42,851		573
c. Zero more days of pay (n/a for 2015)		42,851		0
d. Differences attributable to change in FTE		42,851		0
e. Payment for centrally furnished services		10,534		12
f. Increased cost of laboratory supplies, materials, other expenses, and non-recurring costs		66,378		0
Subtotal				\$776
2. Research Management and Support:				
a. Annualization of January 2014 pay increase & benefits		\$24,284		\$108
b. January FY 2015 pay increase & benefits		24,284		323
c. Zero more days of pay (n/a for 2015)		24,284		0
d. Differences attributable to change in FTE		24,284		0
e. Payment for centrally furnished services		3,942		-209
f. Increased cost of laboratory supplies, materials, other expenses, and non-recurring costs		14,918		0
Subtotal				\$222
Subtotal, Built-in				\$998

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

**Summary of Changes - Continued<sup>1</sup>**

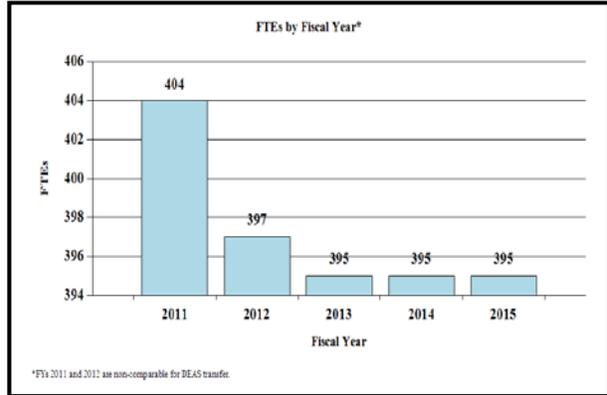
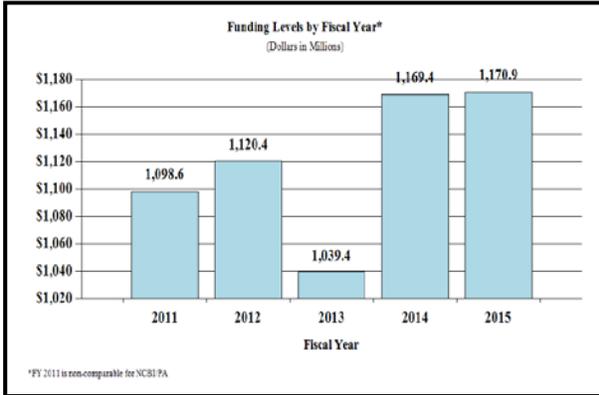
(Dollars in Thousands)

CHANGES	FY 2015 President's Budget		Change from FY 2014	
	No.	Amount	No.	Amount
B. Program:				
1. Research Project Grants:				
a. Noncompeting	980	\$531,364	28	\$11,299
b. Competing	445	241,654	-9	-13,585
c. SBIR/STTR	82	33,442	2	993
Subtotal, RPGs	1,507	\$806,460	21	-\$1,293
2. Research Centers	59	\$81,359	1	\$2,227
3. Other Research	239	36,607	-4	0
4. Research Training	573	23,747	-2	235
5. Research and development contracts	103	59,800	0	1,611
Subtotal, Extramural		\$1,007,973		\$2,780
6. Intramural Research	<u>FTEs</u> 236	\$119,763	<u>FTEs</u> 0	\$410
7. Research Management and Support	159	43,144	0	205
8. Construction		0		0
9. Buildings and Facilities		0		0
Subtotal, Program	395	\$1,170,880	0	\$3,395
Total changes				\$1,453

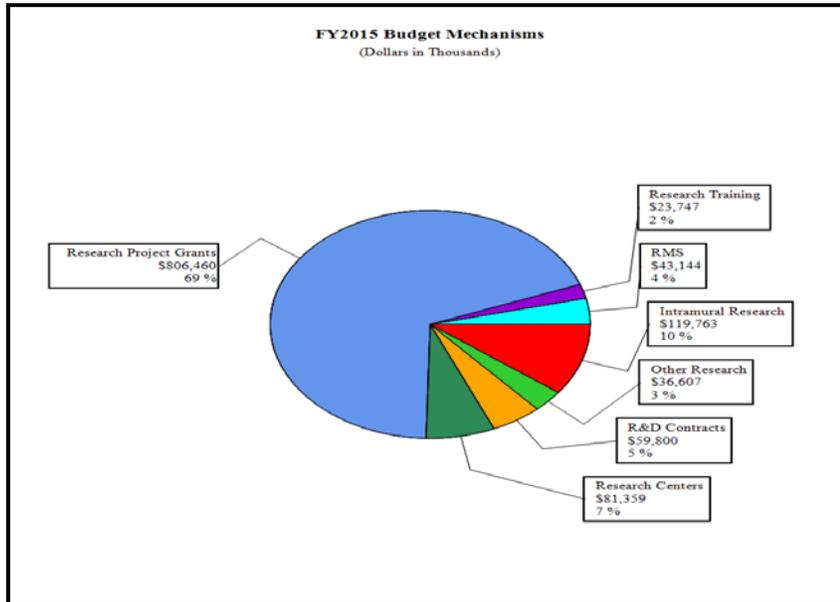
<sup>1</sup> The amounts in the Change from FY 2014 column take into account funding reallocations, and therefore may not add to the net change reflected herein.

## Fiscal Year 2015 Budget Graphs

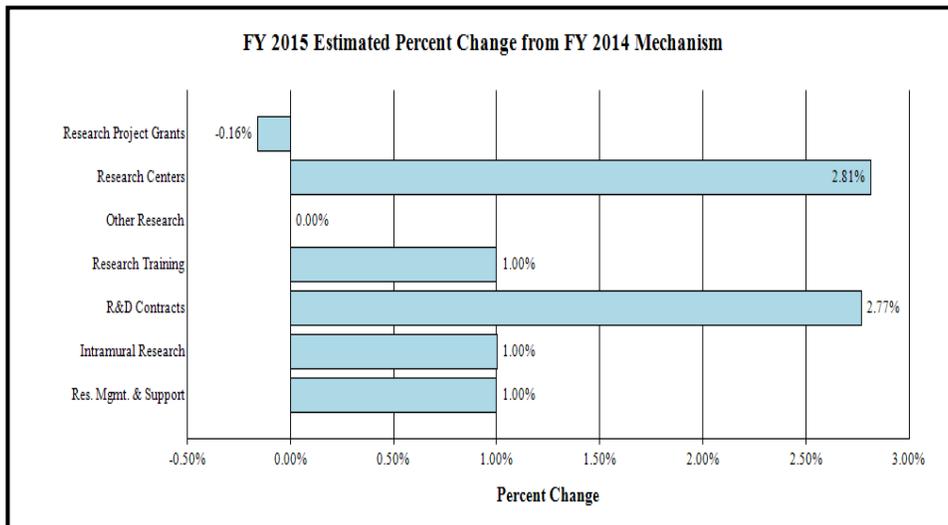
### History of Budget Authority and FTEs:



### Distribution by Mechanism:



### Change by Selected Mechanism:



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

**Budget Authority by Activity<sup>1</sup>  
(Dollars in Thousands)**

	FY 2013 Actual		FY 2014 Enacted <sup>2</sup>		FY 2015 President's Budget		FY 2015 +/- FY 2014	
	<u>FTE</u>	<u>Amount</u>	<u>FTE</u>	<u>Amount</u>	<u>FTE</u>	<u>Amount</u>	<u>FTE</u>	<u>Amount</u>
<b><u>Extramural Research</u></b>								
<u>Detail</u>								
Aging Biology		\$172,302		\$176,702		\$177,191		\$489
Behavioral & Social Research		177,555		182,090		182,594		504
Neuroscience		398,752		508,966		510,373		1,407
Geriatrics & Clinical Gerontology		134,012		137,435		137,815		380
<b>Subtotal, Extramural</b>		<b>\$882,621</b>		<b>\$1,005,193</b>		<b>\$1,007,973</b>		<b>\$2,780</b>
<b>Intramural Research</b>	<b>236</b>	<b>\$115,235</b>	<b>236</b>	<b>\$118,577</b>	<b>236</b>	<b>\$119,763</b>	<b>0</b>	<b>\$1,186</b>
<b>Research Management &amp; Support</b>	<b>159</b>	<b>\$41,543</b>	<b>159</b>	<b>\$42,717</b>	<b>159</b>	<b>\$43,144</b>	<b>0</b>	<b>\$427</b>
<b>TOTAL</b>	<b>395</b>	<b>\$1,039,399</b>	<b>395</b>	<b>\$1,169,427</b>	<b>395</b>	<b>\$1,170,880</b>	<b>0</b>	<b>\$1,453</b>

<sup>1</sup> Includes FTEs whose payroll obligations are supported by the NIH Common Fund.

<sup>2</sup> The amounts in the FY 2014 column take into account funding reallocations, and therefore may not add to the total budget authority reflected herein.

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

**Authorizing Legislation**

	<b>PHS Act/ Other Citation</b>	<b>U.S. Code Citation</b>	<b>2014 Amount Authorized</b>	<b>FY 2014 Enacted</b>	<b>2015 Amount Authorized</b>	<b>FY 2015 PB</b>
Research and Investigation	Section 301	42§241	Indefinite	\$1,169,427,000	Indefinite	\$1,170,880,000
National Institute on Aging	Section 401(a)	42§281	Indefinite		Indefinite	
<b>Total, Budget Authority</b>				<b>\$1,169,427,000</b>		<b>\$1,170,880,000</b>

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

**Appropriations History**

<b>Fiscal Year</b>	<b>Budget Estimate to Congress</b>	<b>House Allowance</b>	<b>Senate Allowance</b>	<b>Appropriation</b>
2005 Rescission	\$1,055,666,000	\$1,055,666,000	\$1,094,500,000	\$1,060,666,000 (\$8,676,000)
2006 Rescission	\$1,057,203,000	\$1,057,203,000	\$1,090,600,000	\$1,057,203,000 (\$10,572,000)
2007 Rescission	\$1,039,828,000	\$1,039,828,000	\$1,039,828,000	\$1,039,828,000 \$0
2008 Rescission	\$1,047,148,000	\$1,062,833,000	\$1,073,048,000	\$1,047,260,000 (\$18,621,000)
2009 Rescission	\$1,048,278,000	\$1,084,321,000	\$1,077,448,000	\$1,080,796,000 \$0
2010 Rescission	\$1,093,413,000	\$1,119,404,000	\$1,099,409,000	\$1,110,229,000 \$0
2011 Rescission	\$1,142,337,000		\$1,140,547,000	\$1,110,229,000 (\$9,748,000)
2012 Rescission	\$1,129,987,000	\$1,129,987,000	\$1,088,091,000	\$1,105,530,000 (\$2,089,000)
2013 Rescission Sequestration	\$1,102,650,000		\$1,124,265,000	\$1,103,441,000 (\$2,207,000) (\$55,385,000)
2014 Rescission	\$1,193,370,000		\$1,185,439,000	\$1,171,038,000 \$0
2015	\$1,170,880,000			

## Justification of Budget Request

### *National Institute on Aging*

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

Budget Authority (BA):

	FY 2013 Actual	FY 2014 Enacted	FY 2015 President's Budget	FY 2015 +/- FY 2014
BA	\$1,039,399,235	\$1,169,427,000	\$1,170,880,000	+\$1,453,000
FTE	395	395	395	0

Program funds are allocated as follows: Competitive Grants/Cooperative Agreements; Contracts; Direct Federal/Intramural and Other.

### **Director's Overview**

By 2030, there will be some 72 million Americans ages 65 or older – more than double the number in that age group in 2000. The number of “oldest old” – people age 85 or older – is expected to more than triple between 2010 and 2050.<sup>1</sup> Age is a primary risk factor for many disabling diseases and conditions, and recent demographic studies have shown a modest increase in activity limitations among members of the enormous baby boom cohort. Consequently, NIA is actively seeking to discover new and effective ways to make added years healthy and productive.

The National Institute on Aging (NIA) leads a national scientific effort to understand the nature of aging in order to promote the health and wellbeing of older adults. NIA's mission is to support and conduct genetic, biological, clinical, behavioral, social, and economic research related to the aging process, diseases, and conditions associated with aging, and other special problems and needs of older Americans; foster the development of research and clinician-scientists for research on aging; and communicate information about aging and advances in research with the scientific community, health care providers, and the public. We carry out our mission by supporting extramural research at universities, research centers, and medical centers across the United States and around the world as well as a vibrant intramural research program at NIA laboratories in Baltimore and Bethesda, Maryland.

Because aging is the single biggest risk factor for the development of many chronic diseases, a better understanding of the basic biology of aging may open up new avenues for prevention and cures. Investment in research on the aging process at its most fundamental levels is therefore a major priority for NIA. The establishment of the trans-NIH GeroScience Interest Group (GSIG)

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<sup>1</sup> Federal Interagency Forum on Aging-Related Statistics. Older Americans 2012: Key Indicators of Well-Being. Federal Interagency Forum on Aging-Related Statistics. Washington, DC: U.S. Government Printing Office. 2012. <http://www.agingstats.gov>.

to facilitate discovery on the common risks and mechanisms behind age-related diseases and conditions has invigorated the field of basic geroscience, as have groundbreaking recent findings such as the discovery that the protein GDF-11 can reverse aging-related cardiac hypertrophy (a dangerous thickening of the heart muscle) in mice – the first time a circulating factor has been shown to reverse age-related damage in a mammal. In October, the GSIG and several private-sector partners convened a national Summit entitled “Advances in Geroscience: Impact on Healthspan and Chronic Disease.” This meeting drew over 500 expert participants from around the world, and we expect its outcomes to further energize researchers in this field.

NIA also maintains an ongoing commitment to supporting basic behavioral and social research in aging. Ongoing initiatives that will be active in FY 2015 include social neuroscience, studies of the reversibility in later life of effects of adverse early life exposures, and studies of the effects of economic downturn on the health and well-being of older individuals. NIA remains an active participant in the trans-NIH Science of Behavior Change initiative and the Basic Behavioral and Social Science Opportunity Network. NIA has also established an initiative to uncover the causes of why the USA has lagged behind almost all other industrialized countries in health and longevity at older ages. NIA-supported research findings have proven relevant to public policy. For example, the Oregon Health Insurance Experiment capitalized on a statewide lottery from a waiting list for Medicaid to examine the effects of the program using a rigorous randomized controlled design. It showed that Medicaid coverage for uninsured low-income adults increased access to care, improved self-reported health, reduced rates of depression, and reduced bad debt and financial strain, but did not yield measurable improvements in physical health outcomes in the first two years of coverage.

Research focused on “precision medicine” – personalized, effective interventions in disease prevention, diagnosis, and treatment -- is another area of emphasis at NIA. For example, NIA is partnering with the Patient-Centered Outcomes Research Institute on a major intervention study to prevent injurious falls, a key cause of disability in older people. Ongoing studies such as Lifestyle Interventions and Independence for Elders, in which researchers are testing an intervention to preserve mobility in older people, and the ASPirin in Reducing Events in the Elderly trial to determine whether aspirin’s benefits outweigh its risks in people over 70, exemplify NIA’s commitment to reducing disease and disability in the elderly.

NIA’s comprehensive Alzheimer’s disease (AD) research program spans the spectrum of discovery, from basic neuroscience through translational research and clinical application. The National Alzheimer’s Plan, 2012 Research Summit, and allocation of additional funds from the NIH Director in 2012 and 2013 have accelerated momentum in this field. The Institute has recently awarded a number of grants to support innovative translational and clinical research on the disease (see “Program Portrait,” Page NIA-4). In addition, investigators have found that a combination of brain imaging and biomarker testing can be used to predict which cognitively normal individuals will eventually develop AD; in a separate study, investigators found that a decline in mobility may precede AD’s cognitive decline. Because treatment for the disease may be most effective before clinical symptoms are evident, the ability to identify at-risk individuals is critically important.

Our efforts in AD research have been bolstered by the advent of new technologies to generate and analyze enormous data sets. These advances in “big data” have been particularly effective in identifying risk and protective genes for AD. For example, an international group of researchers supported in part by the NIA recently collaborated to scan the DNA of over 74,000 volunteers—the largest genetic analysis ever conducted in Alzheimer’s research—and discovered 11 new genetic risk factors linked to late-onset Alzheimer’s, the most common form of the disorder. By suggesting or confirming processes that may influence Alzheimer’s disease development—such as inflammation and synaptic function—the findings point to possible targets for the development of drugs aimed directly at prevention or delaying disease progression.

Finally, NIA supports several innovative programs dedicated to the task of training the next generation of aging researchers. For example, recognizing the need to promote diversity in the research workforce, in FY 2012 NIA established the Advancing Diversity in Aging Research through Undergraduate Education (ADAR) Program, which supports creative and innovative undergraduate-level research education programs to diversify the workforce in aging. ADAR programs have been established at three universities, and we anticipate funding more such programs, based on resource availability and receipt of compelling applications.

For a comprehensive overview of NIA’s plans and priorities, see *Living Long and Well in the 21<sup>st</sup> Century: Strategic Directions for Research on Aging*, at [www.nia.nih.gov/AboutNIA/StrategicDirections](http://www.nia.nih.gov/AboutNIA/StrategicDirections).

#### Overall Budget Policy:

The FY 2015 President’s Budget request is \$1,170.880 million, an increase of \$1.453 million, or 0.1 percent above the FY 2014 level.

## **Program Descriptions and Accomplishments**

### Biology of Aging Program:

#### Understanding Aging Processes, Health, and Longevity

Investigators supported by NIA’s Biology of Aging Program seek to improve our understanding of the basic biological mechanisms underlying the process of aging and age-related diseases. Basic biochemical, genetic, and physiological studies are carried out primarily in animal models, including both mammals and non-mammalian organisms (e.g., flies, worms, yeast). The program’s goal is to identify the biological basis for interventions in the process of aging, which is the major risk factor for many chronic diseases affecting the American population. The program also coordinates the NIH Geroscience Interest Group (GSIG), which was established in 2012 to accelerate and coordinate efforts to promote discoveries on the common risks and mechanisms behind age-related diseases and conditions by developing a collaborative framework that includes multiple NIH Institutes and Centers. In 2013, the GSIG, with support from the Alliance for Aging Research and the Gerontological Society of America, hosted a major scientific conference entitled “Advances in Geroscience: Impacts on Healthspan and Chronic Disease.” Ongoing initiatives in this area that will remain active during FY 2015 include the Interventions Testing Program to identify compounds that extend median and/or maximal life span in a mouse model, along with a similar program to identify such compounds in the worm model *Caenorhabditis elegans*; an initiative to explore the basic biology of aging by investigating the complex

interactions at the single-cell level among individual gene products, biochemical pathways, and cell biological mechanisms that impact aging, as well as interactions between tissues; and studies to enhance our understanding of the molecular mechanisms that mediate progression of osteoarthritis. Finally, the program coordinates the Nathan Shock Centers of Excellence in the Basic Biology of Aging.

Budget Policy:

The FY 2015 President's Budget request is \$177.191 million, an increase of \$0.489 million, or 0.3 percent above the FY 2014 level.

Behavioral and Social Research Program:

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

NIA's Behavioral and Social Research Program supports social and behavioral research to increase our understanding of the processes of aging at the individual, institutional, and societal levels. Research areas include the behavioral, psychological, and social changes individuals experience over the adult lifespan; participation of older people in the economy, families, and communities; the development of interventions to improve the health and cognition of older adults; and the societal impact of population aging. The program also supports research training; development of research resources such as publicly available, cross-nationally comparable studies that support research to understand the sources of international variations in health outcomes; interdisciplinary studies that integrate biological and genetic measures with traditional social, behavioral, and economic measures; longitudinal studies; and interventions to maximize active life and health expectancy. The program coordinates the long-running Health and Retirement Study, the nation's leading source of combined data on health and financial circumstances of Americans over age 50; the Centers on the Demography and Economics of Aging; the Roybal Centers for Translational Research on Aging; and the Resource Centers for Minority Aging Research (RCMARs). Major program activities for FY 2015 will include studies of social neuroscience, the neuroeconomics of aging, and the reasons behind the divergent trends in health and longevity at older ages, both across industrialized nations and across geographical areas in the United States.

Budget Policy:

The FY 2015 President's Budget request is \$182.594 million, an increase of \$0.504 million, or 0.3 percent above the FY 2014 level.

### **Program Portrait: Health Disparities Research at the NIA**

FY 2014 Level: \$113.7 million

FY 2015 Level: \$113.7 million

Difference: \$0.0 million

Significant health disparities persist among racial, ethnic, and socioeconomically disadvantaged groups in the United States. Life expectancy among African Americans continues to lag behind that of White Americans, and older Hispanic and non-Hispanic Black men and women are less likely to report good to excellent health than their non-Hispanic White counterparts. African American and Hispanic men and women over age 65 are also more likely than White Americans to report functional limitations. Nearly every aspect of health, well-being, and quality of life may be affected by race, ethnicity, gender, socioeconomic status (SES), age, education, occupation, residential segregation, sexual orientation and gender identity, and other as-yet-identified factors.

NIA supports a number of studies to identify, understand, and address health disparities among older Americans. One of the most ambitious is the Healthy Aging in Neighborhoods of Diversity across the Lifespan (HANDLS) study, a 20-year project within the NIA Intramural Research Program to examine the influences of race and SES on the development of age-related health disparities among socioeconomically diverse African Americans and whites in Baltimore. Established in 2004, HANDLS has generated a wealth of information: for example, the investigators have found that self-reported racial discrimination is associated with increased oxidative stress (which is itself associated with a variety of adverse health outcomes), suggesting a cellular pathway through which racial discrimination may affect health. The third wave of data collection was recently completed and a fourth initiated.

Aging health disparity research is conducted throughout the Institute's research programs. Notably, the Alzheimer's Disease Centers program's Satellite Diagnostic and Treatment Centers have successfully recruited racial and ethnic minorities to prevention and treatment clinical trials, and the Health and Retirement Study used funding from the American Recovery and Reinvestment Act to increase minority participation. NIA is also exploring interventions to counter the long-term effects of childhood disadvantage, which NIA-supported investigators have shown to influence health in older age. Training and career development initiatives include the Butler-Williams Scholars Program for emerging scientists to receive in-depth training on research design and program development in aging, including issues relevant to aging health disparities, as well as seven Resource Centers for Minority Aging Research, whose mission is to increase the number and diversity of researchers focused on the health of minority elders. Finally, NIA's communications and outreach programs include materials tailored to health disparities populations, including Spanish-language versions of most Age Pages and a Spanish version of the NIA web site.

### Neuroscience Program:

#### Understanding, Preventing, and Treating Cognitive Decline and Disability

NIA's Neuroscience Program supports research and training aimed at better understanding normal and pathological changes in the structure and function of the aging nervous system and how such changes affect behavior. The program's basic mission is to expand knowledge on the aging nervous system to allow improvement in the quality of life of older people. Ongoing activities include 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, this program supports research relevant to problems arising from psychiatric and neurological disorders associated with aging as well as sensory and motor changes that occur with aging. In FY 2015, NIA will partner with the National Eye Institute to support studies on the biological mechanisms underlying common age-related eye diseases. NIA is also the lead federal agency for research on Alzheimer's disease (AD). The Institute supports a national

network of Alzheimer's Disease Centers to translate research advances into improved diagnosis and care of AD patients while pursuing development and testing of effective preventive and treatment interventions for AD, as well as initiatives aimed at improving our understanding of the disease.

**Budget Policy:**

The FY 2015 President's Budget request is \$510.373 million, an increase of \$1.407 million, or 0.3 percent above the FY 2014 level.

**Program Portrait: Ongoing and Planned Initiatives under the National Action Plan on Alzheimer's Disease**

FY 2014 Level: \$405.8 million

FY 2015 Level: \$405.8 million

Difference: \$0.0 million

The National Institute on Aging (NIA) has been a leader in the implementation of the National Alzheimer's Project Act and the development of the National Plan to Address Alzheimer's Disease (AD). Recent initiatives have boosted support for AD research, including the NIH Director's allocation of an additional \$50 million in FY 2012 and \$40 million in FY 2013 for the disease. The estimated total NIH-wide support for Alzheimer's Disease in FY 2015 is over \$566 million. The recent launch of the International Alzheimer's Disease Research Portfolio (IADRP), a publicly available database to capture the full spectrum of current AD research investments and resources throughout the world, will facilitate coordination of these efforts.

Recently, NIA awarded several major new grants supporting translational and clinical research aimed at the disease. These are among the first projects to be developed with direction from the 2012 AD Research Summit, and focus on identifying, characterizing, and validating novel therapeutic targets and identifying possible ways to stop disease progression. All the clinical studies will be in very early stages of the disease, when intervention may be most effective. Researchers will:

- Test new anti-amyloid-beta drugs in volunteers who have an inherited form of AD
- Test an anti-amyloid drug in cognitively normal, at-risk volunteers
- Evaluate the safety and tolerability of increasing doses of allopregnanolone, a natural brain steroid, in treating mild cognitive impairment and AD
- Determine whether recombinant sargramostim, a drug that stimulates the innate immune system, clears abnormal deposits of amyloid before they cause damage, preventing cognitive decline or improving cognition
- Discover, characterize, and validate complex molecular networks and candidate genes that influence susceptibility to cognitive decline and Alzheimer's disease
- Apply innovative analytical methods to large-scale molecular, cellular, and clinical data to construct biological network models and gain new insights into the complex mechanisms of the disease

All of these projects will be active during FY 2015.

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

As we age, our risk for many types of disease and/or disability increases dramatically. NIA's Geriatrics and Clinical Gerontology Program supports research on health, disease, and disability in the aged (other than neurodegeneration, which is the focus of the NIA's Neuroscience 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. Program staff work closely with other NIH Institutes to coordinate research on diseases and conditions that are common among older people or represent a growing threat. For example, an ongoing collaboration with the National Institute of Allergy and Infectious Diseases addresses the increasing incidence of HIV/AIDS among older Americans, and NIA and other NIH Institutes have recently established an initiative, which will be active in FY 2015, to advance the science of palliative care among older patients. The program also plans and administers clinical trials for a number of age-related conditions. In addition, the program coordinates the Claude D. Pepper Older Americans Independence Centers Program, the goal of which is to increase scientific knowledge leading to better ways to maintain or restore independence in older persons.

Budget Policy:

The FY 2015 President's Budget request is \$137.815 million, an increase of \$0.380 million, or 0.3 percent above the FY 2014 level.

**Program Portrait: Women's Health Research at the National Institute on Aging**

FY 2014 Level: \$290.8 million

FY 2015 Level: \$290.8 million

Difference: \$0.0 million

The National Institute on Aging (NIA) supports a diverse portfolio of research on older women's health, including studies of reproductive and cognitive health; diseases and conditions that disproportionately affect older women; economic issues affecting older women; and sex and gender differences across all of these domains.

NIA's flagship study of women's health is the Study of Women's Health Across the Nation (SWAN), which evaluates changes in biological, behavioral, and psychosocial parameters in a multi-ethnic cohort of women as they transition from pre- to post-menopause. Since its inception in 1994, the SWAN Study has provided insight into many factors that influence health and disease risk among midlife women. For example, the SWAN investigators have identified an array of risk factors for bothersome hot flashes, including obesity, smoking, and low socioeconomic status. The study is co-sponsored by the National Institute of Nursing Research, the NIH Office of Research on Women's Health, and the National Center for Complementary and Alternative Medicine.

NIA also supports studies to determine whether menopausal hormone therapy, which may have harmful effects on cognition if taken during the post-menopausal period, may benefit cognition during a critical "window of opportunity" near menopause. A randomized clinical trial of estrogen therapy in younger postmenopausal women, ages 50-55, recently found no long-term risk or benefit to cognitive function. In NIA's MS FLASH (Menopause Strategies: Finding Lasting Answers for Symptoms and Health) Network, investigators are studying a variety of interventions for common menopausal symptoms; the investigators have found that the antidepressant escitalopram can reduce hot flashes and improve quality of life in women around menopause. NIA also supports studies examining sleep patterns and factors that may affect sleep during the menopausal transition as well as studies of sex differences in risk for age-related cognitive decline and cognitive impairment.

## Intramural Research at NIA

Investigators with NIA's Intramural Research Program (IRP) conduct research in the areas of basic, behavioral, clinical, epidemiologic, and translational research. High priority research endeavors and areas of specific focus include: *Molecular and Cellular Biology*, including caloric restriction, cell cycle control, signal transduction, DNA damage and repair, physiology, and medicinal chemistry; *Neuroscience*, including neurodegenerative diseases, drug design and development, and neuronal cell apoptosis; *Genetics*, particularly genetic determinants of aging as an integrated part of human development; *Behavioral Research*, including personality, cognition, and psychophysiology; *Clinical and Translational Research* in cardiology, oncology, immunology, neurology, and endocrinology; and *Epidemiology*, including studies of frailty, cognition, body composition, disability, and molecular biomarkers of aging. The clinical research effort focuses on the translation of basic research findings, prevention, and therapeutic clinical trials focused on age-associated diseases, modulation of treatment efficacy and toxicity in older patients, and establishment of and maintenance of diverse longitudinal cohorts for aging research. Many studies focus on common age-related diseases such as Alzheimer's disease, Parkinson's disease, stroke, atherosclerosis, and diabetes. Others, such as the groundbreaking Baltimore Longitudinal Study of Aging, explore the determinants of healthy aging. Work is also continuing on the Healthy Aging in Neighborhoods of Diversity Across the Life Span (HANDLS) study, which is examining the influences of race and socioeconomic status on the development of age-related health disparities among socioeconomically diverse African Americans and whites living in Baltimore.

### Budget Policy:

The FY 2015 President's Budget request is \$119.763 million, an increase of \$1.186 million, or 1.0 percent above the FY 2014 level. Additional funds will be used to partially offset personnel costs and IT infrastructure improvements.

### Research Management and Support (RMS)

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 1,507 research project grants and centers, as well as 573 full-time training positions and 103 research and support contracts.

### Budget Policy:

The FY 2015 President's Budget request is \$43.144 million, an increase of \$0.427 million, or 1.0 percent above the FY 2014 level. Additional funds will be used to partially offset personnel costs and IT infrastructure improvements.

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

**Budget Authority by Object Class<sup>1</sup>**  
(Dollars in Thousands)

	<b>FY 2014 Enacted</b>	<b>FY 2015 President's Budget</b>	<b>FY 2015 +/- FY 2014</b>
Total compensable workyears:			
Full-time employment	395	395	0
Full-time equivalent of overtime and holiday hours	0	0	0
Average ES salary	\$154	\$154	\$0
Average GM/GS grade	12.0	12.0	0.0
Average GM/GS salary	\$96	\$97	\$1
Average salary, grade established by act of July 1, 1944 (42 U.S.C. 207)	\$96	\$97	\$1
Average salary of ungraded positions	\$141	\$143	\$1
<b>OBJECT CLASSES</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2015</b>
Personnel Compensation			
11.1 Full-Time Permanent	\$28,391	\$29,260	\$869
11.3 Other Than Full-Time Permanent	14,662	15,155	493
11.5 Other Personnel Compensation	273	281	8
11.7 Military Personnel	537	553	16
11.8 Special Personnel Services Payments	7,162	7,167	5
<b>11.9 Subtotal Personnel Compensation</b>	<b>\$51,025</b>	<b>\$52,416</b>	<b>\$1,391</b>
12.1 Civilian Personnel Benefits	\$13,918	\$14,336	\$418
12.2 Military Personnel Benefits	382	383	1
13.0 Benefits to Former Personnel	0	0	0
<b>Subtotal Pay Costs</b>	<b>\$65,325</b>	<b>\$67,135</b>	<b>\$1,810</b>
21.0 Travel & Transportation of Persons	\$993	\$993	\$0
22.0 Transportation of Things	525	525	0
23.1 Rental Payments to GSA	0	0	0
23.2 Rental Payments to Others	0	0	0
23.3 Communications, Utilities & Misc. Charges	2,994	2,994	0
24.0 Printing & Reproduction	0	0	0
25.1 Consulting Services	\$870	\$870	\$0
25.2 Other Services	16,300	16,300	0
25.3 Purchase of goods and services from government accounts	\$91,214	\$93,535	\$2,321
25.4 Operation & Maintenance of Facilities	\$743	\$743	\$0
25.5 R&D Contracts	39,812	38,787	-1,025
25.6 Medical Care	245	245	0
25.7 Operation & Maintenance of Equipment	2,249	2,249	0
25.8 Subsistence & Support of Persons	0	0	0
<b>25.0 Subtotal Other Contractual Services</b>	<b>\$151,433</b>	<b>\$152,729</b>	<b>\$1,296</b>
26.0 Supplies & Materials	\$8,009	\$8,009	\$0
31.0 Equipment	3,357	3,357	0
32.0 Land and Structures	0	0	0
33.0 Investments & Loans	0	0	0
41.0 Grants, Subsidies & Contributions	936,791	935,138	-1,653
42.0 Insurance Claims & Indemnities	0	0	0
43.0 Interest & Dividends	0	0	0
44.0 Refunds	0	0	0
<b>Subtotal Non-Pay Costs</b>	<b>\$1,104,102</b>	<b>\$1,103,745</b>	<b>-\$357</b>
<b>Total Budget Authority by Object Class</b>	<b>\$1,169,427</b>	<b>\$1,170,880</b>	<b>\$1,453</b>

<sup>1</sup> Includes FTEs whose payroll obligations are supported by the NIH Common Fund.

**NATIONAL INSTITUTES OF HEALTH**  
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**Salaries and Expenses**  
(Dollars in Thousands)

OBJECT CLASSES	FY 2014 Enacted	FY 2015 President's Budget	FY 2015 +/- FY 2014
<b>Personnel Compensation</b>			
Full-Time Permanent (11.1)	\$28,391	\$29,260	\$869
Other Than Full-Time Permanent (11.3)	14,662	15,155	493
Other Personnel Compensation (11.5)	273	281	8
Military Personnel (11.7)	537	553	16
Special Personnel Services Payments (11.8)	7,162	7,167	5
<b>Subtotal Personnel Compensation (11.9)</b>	<b>\$51,025</b>	<b>\$52,416</b>	<b>\$1,391</b>
Civilian Personnel Benefits (12.1)	\$13,918	\$14,336	\$418
Military Personnel Benefits (12.2)	382	383	1
Benefits to Former Personnel (13.0)	0	0	0
<b>Subtotal Pay Costs</b>	<b>\$65,325</b>	<b>\$67,135</b>	<b>\$1,810</b>
Travel & Transportation of Persons (21.0)	\$993	\$993	\$0
Transportation of Things (22.0)	525	525	0
Rental Payments to Others (23.2)	0	0	0
Communications, Utilities & Misc. Charges (23.3)	2,994	2,994	0
Printing & Reproduction (24.0)	0	0	0
<b>Other Contractual Services:</b>			
Consultant Services (25.1)	820	820	0
Other Services (25.2)	16,300	16,300	0
Purchases from government accounts (25.3)	57,242	54,105	-3,137
Operation & Maintenance of Facilities (25.4)	743	743	0
Operation & Maintenance of Equipment (25.7)	2,249	2,249	0
Subsistence & Support of Persons (25.8)	0	0	0
<b>Subtotal Other Contractual Services</b>	<b>\$77,354</b>	<b>\$74,217</b>	<b>-\$3,137</b>
Supplies & Materials (26.0)	\$8,009	\$8,009	\$0
<b>Subtotal Non-Pay Costs</b>	<b>\$89,875</b>	<b>\$86,738</b>	<b>-\$3,137</b>
<b>Total Administrative Costs</b>	<b>\$155,200</b>	<b>\$153,873</b>	<b>-\$1,327</b>

**NATIONAL INSTITUTES OF HEALTH  
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**Detail of Full-Time Equivalent Employment (FTE)**

OFFICE/DIVISION	FY 2013 Actual			FY 2014 Est.			FY 2015 Est.		
	Civilian	Military	Total	Civilian	Military	Total	Civilian	Military	Total
Division of Aging Biology									
Direct:	15		15	15		15	15		15
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	15		15	15		15	15		15
Division of Behavioral & Social									
Direct:	13		13	13		13	13		13
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	13		13	13		13	13		13
Division of Extramural Affairs									
Direct:	35		35	35		35	35		35
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	35		35	35		35	35		35
Division of Geriatrics & Clinical									
Direct:	12	1	13	12	1	13	12	1	13
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	12	1	13	12	1	13	12	1	13
Division of Neuroscience									
Direct:	19	1	20	19	1	20	19	1	20
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	19	1	20	19	1	20	19	1	20
Intramural Research Program									
Direct:	234	2	236	234	2	236	234	2	236
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	234	2	236	234	2	236	234	2	236
Office of Administrative Management									
Direct:	38		38	38		38	38		38
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	38		38	38		38	38		38
Office of the Director									
Direct:	25		25	25		25	25		25
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	25		25	25		25	25		25
<b>Total</b>	<b>391</b>	<b>4</b>	<b>395</b>	<b>391</b>	<b>4</b>	<b>395</b>	<b>391</b>	<b>4</b>	<b>395</b>
Includes FTEs whose payroll obligations are supported by the NIH Common Fund.									
FTEs supported by funds from Cooperative Research and Development Agreements.	0	0	0	0	0	0	0	0	0
<b>FISCAL YEAR</b>	<b>Average GS Grade</b>								
2011	12.0								
2012	12.0								
2013	12.0								
2014	12.0								
2015	12.0								

**NATIONAL INSTITUTES OF HEALTH**  
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**Detail of Positions**

GRADE	FY 2013 Actual	FY 2014 Enacted	FY 2015 President's Budget
Total, ES Positions	1	1	1
Total, ES Salary	154,190	154,190	154,190
GM/GS-15	32	32	32
GM/GS-14	48	48	48
GM/GS-13	59	59	59
GS-12	61	61	61
GS-11	22	22	22
GS-10	0	0	0
GS-9	35	35	35
GS-8	10	10	10
GS-7	19	19	19
GS-6	5	5	5
GS-5	1	1	1
GS-4	1	1	1
GS-3	1	1	1
GS-2	1	1	1
GS-1	0	0	0
Subtotal	295	295	295
Grades established by Act of July 1, 1944 (42 U.S.C. 207)	0	0	0
Assistant Surgeon General	0	0	0
Director Grade	4	4	4
Senior Grade	0	0	0
Full Grade	0	0	0
Senior Assistant Grade	0	0	0
Assistant Grade	0	0	0
Subtotal	4	4	4
Ungraded	94	94	94
Total permanent positions	297	297	297
Total positions, end of year	394	394	394
Total full-time equivalent (FTE) employment, end of year	395	395	395
Average ES salary	154,190	154,190	154,190
Average GM/GS grade	12.0	12.0	12.0
Average GM/GS salary	94,926	95,638	96,594

Includes FTEs whose payroll obligations are supported by the NIH Common Fund.