

DEPARTMENT OF HEALTH AND HUMAN SERVICES

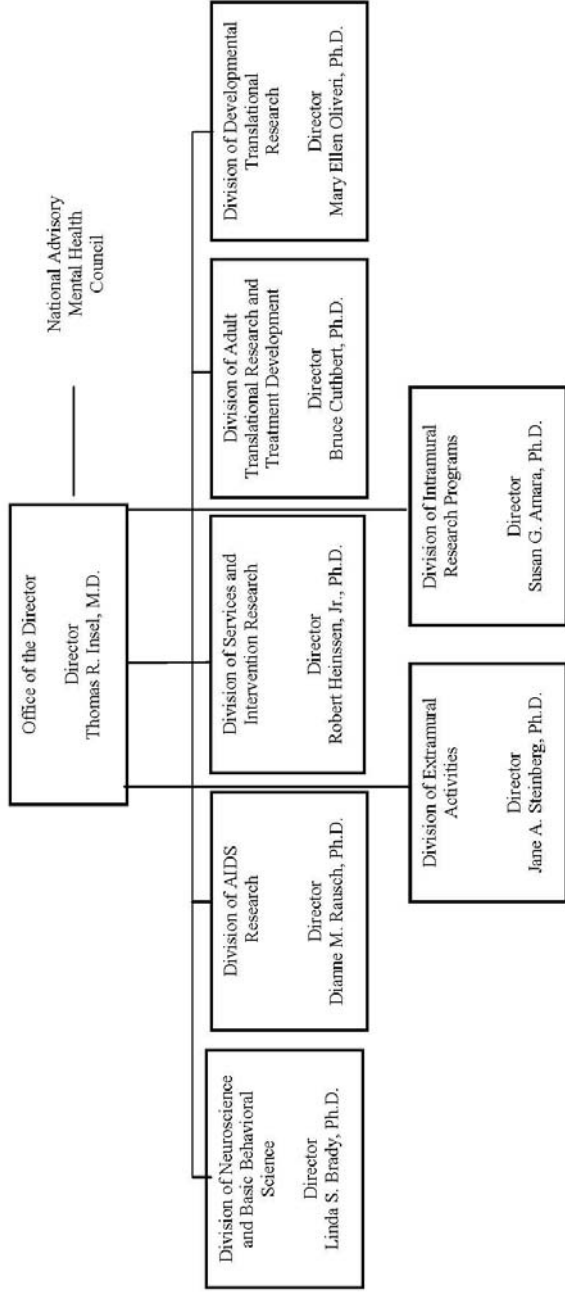
NATIONAL INSTITUTES OF HEALTH

National Institute of Mental Health (NIMH)

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DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health
National Institute of Mental Health



NATIONAL INSTITUTES OF HEALTH

National Institute of Mental Health

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

\$1,465,782,000.

**NATIONAL INSTITUTES OF HEALTH
National Institute of Mental Health**

Amounts Available for Obligation ¹
(Dollars in Thousands)

Source of Funding	FY 2012 Actual	FY 2013 CR	FY 2014 PB
Appropriation	1,483,068	1,489,324	1,465,782
Rescission	(2,803)	0	0
Subtotal, adjusted appropriation	1,480,265	1,489,324	1,465,782
Real transfer under Secretary's transfer authority	(421)	0	0
Real transfer for Secretary's transfer for Alzheimer's disease (AD)	(975)	0	0
Comparative transfers to NLM for NCBI and Public Access	(1,353)	(1,752)	0
Subtotal, adjusted budget authority	1,477,516	1,487,572	1,465,782
Unobligated balance, start of year	0	0	0
Unobligated balance, end of year	0	0	0
Subtotal, adjusted budget authority	1,477,516	1,487,572	1,465,782
Unobligated balance lapsing	(25)	0	0
Total obligations	1,477,491	1,487,572	1,465,782

¹ Excludes the following amounts for reimbursable activities carried out by this account:
FY 2012 - \$15,089 FY 2013 - \$20,000 FY 2014 - \$20,000

NATIONAL INSTITUTES OF HEALTH
National Institute of Mental Health
Budget Mechanism - Total ¹
(Dollars in Thousands)

MECHANISM	FY 2012 Actual		FY 2013 CR		FY 2014 PB		Change vs. FY 2012	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Research Grants								
<u>Research Projects</u>								
Noncompeting	1,516	\$662,789	1,557	\$661,674	1,553	\$645,658	37	-\$17,131
Administrative Supplements	(127)	17,392	(127)	17,392	(109)	15,000	(18)	-2,392
Competing:								
Renewal	80	39,108	83	40,796	82	40,329	2	1,221
New	501	196,911	524	205,137	514	201,518	13	4,607
Supplements	3	819	3	819	3	810	0	-9
Subtotal, Competing	584	\$236,839	610	\$246,752	599	\$242,657	15	\$5,818
Subtotal, RPGs	2,100	\$917,019	2,167	\$925,818	2,152	\$903,315	52	-\$13,704
SBIR/STTR	90	36,352	94	38,009	97	39,045	7	2,693
Research Project Grants	2,190	\$953,371	2,261	\$963,827	2,249	\$942,360	59	-\$11,011
<u>Research Centers</u>								
Specialized/Comprehensive	55	99,069	55	99,069	55	97,473	0	-1,596
Clinical Research	0	0	0	0	0	0	0	0
Biotechnology	0	0	0	0	0	0	0	0
Comparative Medicine	0	500	0	500	0	500	0	0
Research Centers in Minority Institutions	0	0	0	0	0	0	0	0
Research Centers	55	\$99,569	55	\$99,569	55	\$97,973	0	-\$1,596
<u>Other Research</u>								
Research Careers	375	59,544	375	59,544	375	59,544	0	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	76	25,755	76	25,755	76	25,755	0	0
Other Research	451	\$85,299	451	\$85,299	451	\$85,299	0	\$0
Total Research Grants	2,696	\$1,138,239	2,767	\$1,148,695	2,755	\$1,125,632	59	-\$12,607
<u>Ruth L. Kirschstein Training Awards</u>	<u>FTEPs</u>		<u>FTEPs</u>		<u>FTEPs</u>		<u>FTEPs</u>	
Individual	276	10,872	276	10,872	272	10,872	-4	0
Institutional	608	29,761	608	29,761	590	29,761	-18	0
Total Research Training	884	\$40,633	884	\$40,633	862	\$40,633	-22	\$0
Research & Development Contracts	149	59,021	149	58,622	149	59,895	0	874
<i>SBIR/STTR (non-add)</i>	<i>(0)</i>	<i>(77)</i>	<i>(0)</i>	<i>(77)</i>	<i>(0)</i>	<i>(77)</i>	<i>(0)</i>	<i>-(0)</i>
Intramural Research	<u>FTEs</u>		<u>FTEs</u>		<u>FTEs</u>		<u>FTEs</u>	
350	166,471	350	166,471	350	166,471	0	0	
Research Management and Support	233	73,151	265	73,151	265	73,151	32	0
Construction		0		0		0		0
Buildings and Facilities		0		0		0		0
Total, NIMH	583	\$1,477,516	615	\$1,487,572	615	\$1,465,782	32	-\$11,734

¹ All items in italics and brackets are "non-adds."

Major Changes in the Fiscal Year 2014 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 2014 President’s Budget for NIMH, which is \$11.7 million less than the FY 2012 level, for a total of \$1,465.7 million. This total reflects a shift of \$27 million to NIAID for behavioral science research in AIDS. Thus, the comparability adjusted program level for NIMH is \$1,492.9 million, an increase of \$15 million over FY 2012 (see details and table below).

Research Project Grants (RPGs) (-\$11.011 million; total \$942.360 million): NIMH will fund 599 competing RPGs in FY 2014, an increase of 15 over FY 2012. About 1,553 noncompeting RPG awards, totaling \$645.658 million, also will be made in FY 2014. NIH budget policy for RPGs in FY 2014, continues FY 2012 policy of eliminating inflationary increases for future year commitments. However adjustments for special needs (such as equipment and added personnel) will continue to be accommodated.

Research Training (+\$0.0 million; total \$40.633 million): The Ruth L. Kirschstein NRSA budget reflects a stipend increase to \$42,000 for the entry level postdoctoral trainees and fellows along with 4 percent increases for each subsequent level of experience. These increases are consistent with stipend increases recommended by the Advisory Committee to the NIH Director and the National Research Council. In addition, this increase is consistent with 42 USC 288(b)(5), which anticipates periodic adjustments in stipends “to reflect increases in the cost of living.”

AIDS Research (-\$27.123 million; total \$152.054 million): The NIMH Budget reflects a shift of funds to NIAID to expand collaborative efforts targeted to better integrate behavioral science into biomedical approaches to enhance prevention and treatment while decreasing the burden of living with HIV.

<i>Dollars in Millions</i>	FY 2012 Actual	FY 2014 President's Budget	Change from FY 2012
NIMH, BA	\$1,478	\$1,466	(\$12)
Shift of AIDS research to NIAID		\$27	
Total NIMH, comparably adjusted	\$1,478	\$1,493	\$15

NATIONAL INSTITUTES OF HEALTH
National Institute of Mental Health
Summary of Changes
(Dollars in Thousands)

FY 2012 Actual		\$1,477,516		
FY 2014 President's Budget		\$1,465,782		
Net change		-\$11,734		
CHANGES	2014 President's Budget		Change from FY 2012	
	FTEs	Budget Authority	FTEs	Budget Authority
A. Built-in:				
1. Intramural Research:				
a. Annualization of March				
2013 pay increase & benefits		\$57,494		\$143
b. January FY 2014 pay increase & benefits		57,494		427
c. One more day of pay		57,494		218
d. Differences attributable to change in FTE		57,494		0
e. Payment for centrally furnished services		29,955		538
f. Increased cost of laboratory supplies, materials, other expenses, and non-recurring costs		79,022		96
Subtotal				\$1,422
2. Research Management and Support:				
a. Annualization of March				
2013 pay increase & benefits		\$39,184		\$99
b. January FY 2014 pay increase & benefits		39,184		290
c. One more day of pay		39,184		148
d. Differences attributable to change in FTE		39,184		0
e. Payment for centrally furnished services		10,408		187
f. Increased cost of laboratory supplies, materials, other expenses, and non-recurring costs		23,559		3
Subtotal				\$727
Subtotal, Built-in				\$2,149

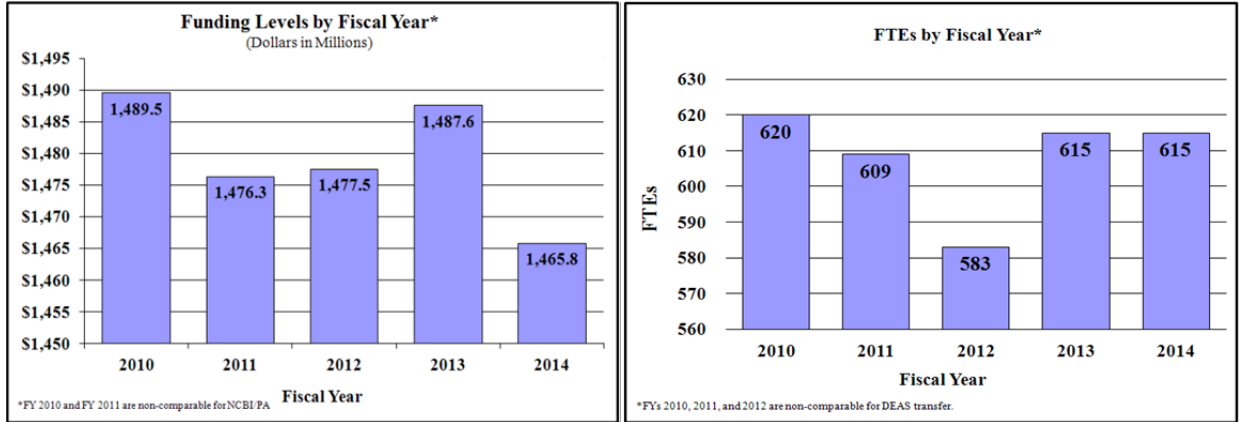
NATIONAL INSTITUTES OF HEALTH
National Institute of Mental Health

Summary of Changes--continued

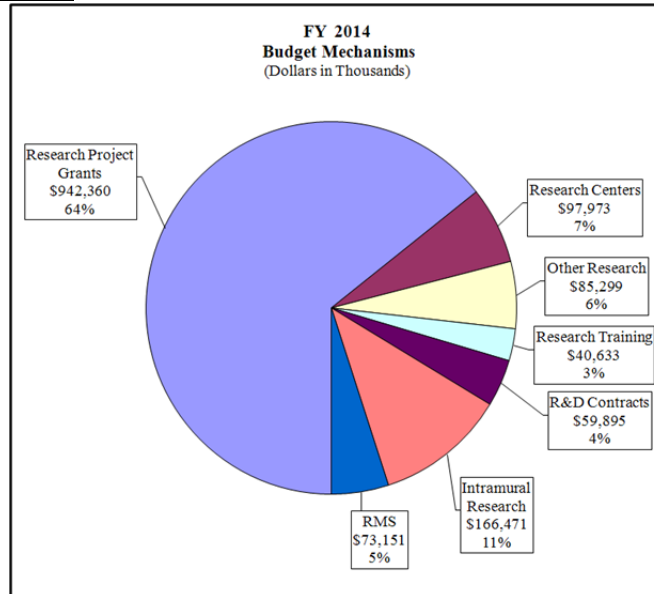
CHANGES	2014		Change from FY 2012	
	President's Budget			
	No.	Amount	No.	Amount
B. Program:				
1. Research Project Grants:				
a. Noncompeting	1,553	\$660,658	37	-\$19,523
b. Competing	599	242,657	15	5,818
c. SBIR/STTR	97	39,045	7	2,693
Total	2,249	\$942,360	59	-\$11,012
2. Research Centers	55	\$97,973	0	-\$1,596
3. Other Research	451	85,299	0	0
4. Research Training	862	40,633	-22	0
5. Research and development contracts	149	59,895	0	874
Subtotal, Extramural		\$1,226,160		-\$11,734
6. Intramural Research	<u>FTEs</u> 350	\$166,471	<u>FTEs</u> 0	-\$1,422
7. Research Management and Support	265	73,151	32	-727
8. Construction		0		0
9. Buildings and Facilities		0		0
Subtotal, program	615	\$1,465,782	32	-\$13,883
Total changes				-\$11,734

Fiscal Year 2014 Budget Graphs

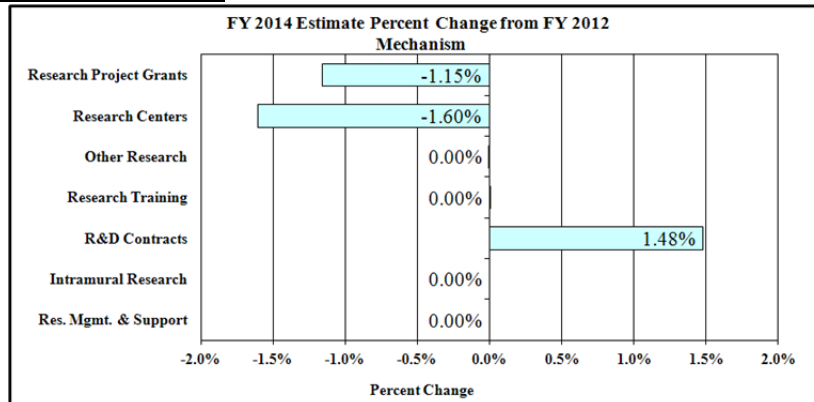
History of Budget Authority and FTEs:



Distribution by Mechanism:



Change by Selected Mechanisms:



NATIONAL INSTITUTES OF HEALTH
National Institute of Mental Health
Budget Authority by Activity ^{1,2}
(Dollars in Thousands)

	FY 2012 Actual		FY 2013 CR		FY 2014 PB		Change vs. FY 2012	
	FTEs	Amount	FTEs	Amount	FTEs	Amount	FTEs	Amount
Extramural Research								
<u>Detail:</u>								
Neuroscience & Basic Behavioral Science		\$448,392		\$452,287		455,117		\$6,725
Developmental Translational Research		152,345		153,668		154,630		\$2,285
Adult Translational Research & Treatment Development		241,228		243,324		\$244,847		\$3,619
Services & Intervention Research		151,565		152,882		153,839		\$2,274
AIDS Research		179,177		180,523		152,054		-\$27,123
Office of the Director		65,187		65,266		65,673		\$486
Subtotal, Extramural		\$1,237,894		\$1,247,950		\$1,226,160		(\$11,734)
Intramural Research	350	\$166,471	350	\$166,471	350	\$166,471	0	\$0
Research Management & Support	233	\$73,151	265	\$73,151	265	\$73,151	32	\$0
TOTAL	583	\$1,477,516	615	\$1,487,572	615	\$1,465,782	32	(\$11,734)

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

2. Includes Transfers and Comparable Adjustments as detailed in the "Amounts Available for Obligation" table.

3. Total NIMH funding in HIV/AIDS is \$190.387 million in FY 2012; \$191,733 million in FY 2013; and \$163.264 million in FY 2014.

NATIONAL INSTITUTES OF HEALTH
National Institute of Mental Health

Authorizing Legislation

	PHS Act/ Other Citation	U.S. Code Citation	2013 Amount Authorized	FY 2013 CR	2014 Amount Authorized	FY 2014 PB
Research and Investigation	Section 301	42§241	Indefinite	\$1,487,572,000	Indefinite	\$1,465,782,000
National Institute of Mental Health	Section 401(a)	42§281	Indefinite		Indefinite	
Total, Budget Authority				\$1,487,572,000		\$1,465,782,000

**NATIONAL INSTITUTES OF HEALTH
National Institute of Mental Health**

Appropriations History

Fiscal Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
2005	\$1,420,609,000	\$1,420,609,000	\$1,436,800,000	\$1,423,609,000
Rescission				(\$11,676,000)
2006	\$1,417,692,000	\$1,417,692,000	\$1,460,393,000	\$1,417,692,000
Rescission				(\$14,177,000)
2007	\$1,394,806,000	\$1,394,806,000	\$1,403,551,000	\$1,404,494,000
Rescission				-
2008	\$1,405,421,000	\$1,425,531,000	\$1,436,001,000	\$1,429,466,000
Rescission				(\$24,973,000)
Supplemental				\$7,475,000
2009	\$1,406,841,000	\$1,455,145,000	\$1,445,987,000	\$1,450,491,000
Rescission				-
2010	\$1,474,676,000	\$1,502,266,000	\$1,475,190,000	\$1,489,372,000
Rescission				-
2011	\$1,540,345,000	-	\$1,537,942,000	\$1,489,372,000
Rescission				(\$13,078,800)
2012	\$1,517,006,000	\$1,517,006,000	\$1,460,671,000	\$1,483,068,000
Rescission				(\$2,802,999)
2013	\$1,479,204,000	-	\$1,483,687,000	-
Rescission				-
2014	\$1,465,782,000	-	-	-

Justification of Budget Request

National Institute of Mental Health

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

Budget Authority (BA):

	FY 2012 Actual	FY 2013 CR	FY 2014 President's Budget	FY 2014 +/- FY 2012
BA	\$1,477,516,000	\$1,487,572,000	\$1,465,782,000	-\$11,734,000
FTE	583	615	615	+32

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

Director's Overview

The National Institute of Mental Health (NIMH) is the lead Federal agency for research on mental and behavioral disorders, with a mission to transform the understanding and treatment of mental illnesses through basic and clinical research, paving the way for prevention, recovery, and cure.

In a given year, an estimated 11.4 million American adults (approximately five percent of all adults) suffer from a seriously disabling mental illness.¹ Mental disorders are the leading cause of disability in the United States and Canada, accounting for 28 percent of all years of life lost to disability and premature mortality (Disability Adjusted Life Years or DALYs).² Suicide is the 10th leading cause of death in the United States, accounting for the loss of more than 38,000 American lives each year, more than double the number of lives lost to homicide.³ The social and economic costs associated with these disorders are tremendous. A cautious estimate places the direct and indirect financial costs associated with mental illness in the U.S. at well over \$300 billion annually, and it ranks as the third most costly medical condition in terms of overall health care expenditure, behind only heart conditions and traumatic injury.^{4,5} The burden of illness for mental disorders is projected to sharply increase over the next 20 years.⁶

¹ Substance Abuse and Mental Health Services Administration, *Results from the 2010 National Survey on Drug Use and Health: Mental Health Findings, NSDUH Series H-42, HHS Publication No. (SMA) 11-4667*. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2012.

² The World Health Organization. *The global burden of disease: 2004 update, Table A2: Burden of disease in DALYs by cause, sex and income group in WHO regions, estimates for 2004*. Geneva, Switzerland: WHO, 2008.

³ Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. *Web-based Injury Statistics Query and Reporting System (WISQARS)*: www.cdc.gov/ncipc/wisqars accessed October 2012.

⁴ Insel TR. *Assessing the economic cost of serious mental illness*. *Am J Psychiatry*. 2008 Jun;165(6):663-5.

⁵ Soni A. *The Five Most Costly Conditions, 1996 and 2006: Estimates for the U.S. Civilian Noninstitutionalized Population*. Statistical Brief #248. July 2009. Agency for Healthcare Research and Quality, Rockville, MD.

⁶ Bloom DE, Cafiero ET, Jané-Llopis E, Abrahams-Gessel S, Bloom LR, Fathima S, Feigl AB, Gaziano T, Mowafi M, Pandya A, Prettner K, Rosenberg L, Seligman B, Stein A, Weinstein C. *The Global Economic Burden of Non-communicable Diseases*. Geneva, Switzerland: World Economic Forum, 2011.

Schizophrenia, bipolar disorder, depression, post-traumatic stress disorder, anxiety disorders, autism spectrum disorder, eating disorders, borderline personality disorder, and other disorders are seriously disabling, life-threatening illnesses. NIMH's Strategic Plan provides direction for harnessing rigorous scientific research to develop new diagnostic tests, more effective interventions, and better prevention strategies to address the public health burden of these disorders. NIMH will support research initiatives in FY 2014 that will build upon and expand basic brain and behavioral research; translate basic research into innovative, new treatments; and foster the next generation of research scientists who will continue the NIMH mission, ensuring that evidence-based interventions reach those most in need.

Investing in Basic Research

NIMH supports a robust genomics research program, which is the foundation for studying the biological basis of mental disorders and identifying targets for future treatment development. A decade ago when the human genome project was completed, one of the biggest surprises was that among our 3 billion bases of DNA, only about 2 percent was actually devoted to genes – the sequences coding for RNA, which is, in turn, translated into the proteins necessary for cells to function. However, recent landmark studies have shown that nearly 80 percent of the genome carries information that is read out into RNA yet is never translated into protein. Some of this “non-coding” RNA is regulatory – controlling when certain genes are turned on or off. Parts of the non-coding genome appear unique to humans, especially regions that are involved in neurodevelopment. Most of the previously described genetic differences associated with autism and mental disorders – and there are well over 100 such findings by now – are in the non-coding regions of the genome. In FY 2014, NIMH will support an initiative to tease apart the functional importance of these non-coding regions and their role in mental disorders. The Institute will continue to place high priority on understanding how the dynamic nature of the genome, in concert with environmental influences, affects neural circuit development and ultimately contributes to mental illness.

In addition to targeted initiatives, NIMH invests significantly in resources and tools for the scientific community in order to accelerate the pace of discovery. For example, NIMH has supported the creation of a collection of web-based atlases that depict when and where genes are switched on and off across the span of normal human brain development. NIMH investments have also advanced the field of “optogenetics” – an exciting technique that uses light to turn neurons on and off, providing the first precise method for manipulating discrete brain circuits to better understand how these circuits work and how dysfunction could lead to mental illness. In another leap forward, NIMH will support a large project in FY 2014 to develop a potentially transformative technique to visualize every circuit in the whole, intact brain with cellular resolution – something that is not possible with traditional imaging techniques.

Advancing Translational Sciences

Once advances have been made through basic research, NIMH's next step is in translating this knowledge to develop new and improved treatments and prevention strategies. NIMH supports a continuum of translational research, from small-scale, exploratory studies focused on probing

potential treatment targets, to large-scale, practical clinical trials that examine the effectiveness of a treatment across a broad spectrum of patients. In FY 2014, NIMH will continue to support two initiatives that are working to maximize the efficiency, and quicken the public health benefit, of translational science. The New Experimental Medicine: Fast-Fail Trials (FAST) aim to tie prospective therapies to underlying disease mechanisms in order to quickly rule out ineffective compounds. The idea is to fund small, early-stage clinical studies that include a clearly defined biological readout of whether a compound has hit its intended target. Molecules that fail would be discarded without expending any further resources, saving the resources to test other promising candidates.

The second initiative, called New, Rapidly-Acting Treatments for Treatment-Resistant Depression (RAPID), is developing treatments (both pharmacological and non-pharmacological) for depression that would work within three days, in contrast to the currently available treatments that begin to work in weeks or months. Studies funded through the RAPID framework will be proof-of-concept clinical trials that test promising interventions among adults diagnosed with treatment-resistant depression.

Encouraging New Investigators and New Ideas

NIMH remains committed to ensuring that a future generation of researchers will be ready to continue this critical work and push the field forward. NIMH's Biobehavioral Research Awards for Innovative New Scientists (BRAINS) supports the research and career development of outstanding early career scientists who study topics relevant to the Institute. These generous awards, modeled on the NIH New Innovator Awards, have supported cutting-edge research projects from young scientists addressing key gap areas outlined in NIMH's Strategic Plan.

Research breakthroughs are fostered by diversity – diversity in ideas, in training, and in demographic characteristics. NIMH is committed to ensuring that all aspiring researchers have an opportunity to join and thrive in the mental health sciences. To support this goal into FY 2014 and beyond, NIMH will support the Administrative Supplement Program Providing Research Experiences for Physicians and Medical Students from Diverse Backgrounds (PREP). PREP provides supplemental funding to existing NIMH grants to support the recruitment and training of early-stage investigators from underrepresented racial and ethnic groups and individuals with disabilities. Participation in this program will enhance the professional development of the young investigators, sustain their career trajectory through research independence, and lead to scientific advances that will help transform the understanding and treatment of mental illness.

Overall Budget Policy: The FY 2014 President's Budget request is \$1,465.782 million, a decrease of \$11.734 million, or 0.8 percent below the FY 2012 Actual level. A component of this is due to a shift in NIMH resources to the NIAID AIDS program to accommodate the expansion of integrated scientific approaches necessary reach the goals of an "AIDS-free generation." Trans-NIH AIDS collaborations have been effective in the past; however, future complex combination studies are necessary to accelerate progress to new levels of effectiveness, and such studies will be facilitated by an integrated funding stream for research. Funds are included in R&D contracts to support trans-NIH initiatives, such as the Basic Behavioral and

Social Sciences Opportunity Network (OppNet). The apparent increase in estimated FY 2014 FTE compared to the FY 2012 actual FTE usage level is due to the effect of transferring positions previously funded from a centralized support operation (Division of Extramural Activities Support) to individual ICs as of year-end 2012. As a result of the DEAS transfer, estimated salaries and benefits for FY 2014 are proportionately higher than those identified for FY 2012 and previous years.

Program Descriptions and Accomplishments

Neuroscience and Basic Behavioral Science

The Division of Neuroscience and Basic Behavioral Science provides support for research in the areas of basic neuroscience, genetics, basic behavioral science, research training, resource development, technology development, drug discovery, and research dissemination. In cooperation with other NIMH programs and the wider research community, this program ensures that relevant basic scientific knowledge is generated and used to improve the diagnosis, treatment, and prevention of mental and behavioral disorders.

NIMH funds grants across a range of research topics to facilitate understanding of the basic neurobiology that underlies mental disorders. A growing body of evidence indicates that astrocytes – brain cells that support and protect neurons – have an important role in the formation and regulation of the cell structures that enable neurons to signal to other cells. Dysfunction in astrocytes may be related to the development of disorders such as autism spectrum disorder and schizophrenia. The Division will continue to support research aimed at developing new tools for understanding the different types of astrocytes that reside in different brain areas and how they contribute to brain function.

Budget Policy: The FY 2014 President’s Budget estimate is \$455.117 million, an increase of \$6.725 million, or 1.5 percent above the FY 2012 Actual level.

Program Portrait: Creating the Brain Research through Application of Innovative Neurotechnologies (BRAIN) Project

FY 2012 Level: \$ 0.0 million

FY 2014 Level: \$7.5 million

Change: +\$7.5 million

Understanding how the brain functions requires the ability to monitor the activity of millions of nerve cells simultaneously and translate that activity into circuit diagrams and algorithms. Our efforts to do so have been hindered by measurement technologies that are too local, too slow, or too diffuse to record physiological patterns with the detail and accuracy necessary for detecting and analyzing circuit- and network-level activity. However, approaches emerging from nanoscience have the potential to overcome these technological challenges. By fusing nanotechnology and neuroscience, we can advance our understanding of how the brain works and fails to work properly, and how it can be repaired.

NIMH, in partnership with the National Institute of Neurological Disorders and Stroke, the Defense Advanced Research Project Agency, the National Science Foundation, and the White House Office of Science &

Technology Policy, proposes the BRAIN project – a grand challenge to increase our capacity to record from brain areas by three orders of magnitude over the next five years. Specifically, this initiative will encourage the development of new classes of multi-neuron sensors necessary for revealing the large-scale actions of neural processes. Such recordings will generate immense amounts of data, requiring new computational tools to discover how information is represented in activity patterns and how those patterns evolve over time as new information is received. Ultimately, these efforts will be complemented by others aimed at putting information back into the brain, adjusting activity levels and inserting sensory signals when vision, hearing, motor control, touch, or even memory is lost.

We anticipate that within five years, it could be possible to move from monitoring a hundred to tens of thousands of nerve cells in a behaving organism. Mathematical and statistical tools developed in this effort will be useful in other massive data applications ranging from health data to genomics. The BRAIN project also has the potential to create new industries and shape math, science, and technology education for the next generation.

Developmental Translational Research

The Division of Developmental Translational Research (DDTR) stimulates and promotes an integrated program of research across basic behavioral and psychological processes, environmental processes, brain development, genetics, developmental psychopathology, and therapeutic interventions. The Division's mission is to translate findings from basic research into an improved understanding of the developmental origins and trajectories of mental disorders, with the ultimate goal of preventing and curing mental disorders that begin in childhood and adolescence.

In FY 2012, the Division funded two new Autism Centers of Excellence (ACE). The ACE Program is a trans-NIH initiative that supports large-scale multidisciplinary studies on autism spectrum disorder (ASD), with the goal of determining the disorder's causes and devising the best treatments. One ACE project will chart the development of brain networks involved in social interaction, and the second will investigate the poorly-understood nature of ASD in females, focusing on genes, brain function, and behavior. NIMH will fund two additional ACEs in FY 2013. The Division has been supporting the creation of new research resources that have collected genomic and other biomarker data and materials in order to help characterize the relationship between our genes and how they are expressed over the course of development. In FY 2013 and FY 2014, the Division will support an initiative to stimulate the broader research community to fully use these NIMH-funded resources. Investigators will be encouraged to study the trajectories of risk for serious mental disorders caused by the combined and interactive influences of genetics, brain maturation, neurocognitive function, and environment.

Budget Policy: The FY 2014 President's Budget estimate is \$154.630 million, an increase of \$2.285 million, or 1.5 percent above the FY 2012 Actual level.

Adult Translational Research and Treatment Development

The Division of Adult Translational Research and Treatment Development plans, supports, and administers programs of research, research training, and resource development aimed at understanding the biological, psychological, and functional changes that are involved in the causes and course of mental illness, and hastening the translation of scientific advances into innovations in clinical care for adults. The Division supports a broad research portfolio including research studies of the risk factors for major psychiatric disorders; clinical

neuroscience to elucidate causes and functional effects of these disorders; and psychosocial, pharmacological, and somatic treatment development.

In FY 2012, the Division played a lead role in implementing the Research Domain Criteria initiative (RDoC), a project designed to study disorders in terms of functional dimensions, such as fear circuitry and working memory, which cut across traditional classes of mental disorders. NIMH anticipates that RDoC-oriented research will transform our understanding of mental disorders and open new approaches to treatment development. Also in FY 2012, the Division led the Delaware Project on Clinical Science Training, which aims to create best practices for training graduate students, interns, and post-doctoral fellows studying mental health issues. The project emphasizes continuity across the psychopathology research spectrum from basic mechanisms to effective interventions.

Budget Policy: The FY 2014 President's Budget estimate is \$244.847 million, an increase of \$3.619 million, or 1.5 percent above the FY 2012 Actual level.

Services and Intervention Research

The Division of Services and Intervention Research supports research to evaluate the effectiveness of pharmacological, psychosocial, rehabilitative, and combination interventions for mental and behavioral disorders. The program evaluates interventions for children, adolescents, and adults, focusing on acute and long-term symptom reduction, remission, and improved community functioning. The Division also supports mental health services research, including interventions to improve the quality and outcomes of care; organization and system-level interventions to enhance service delivery; and strategies for widespread dissemination and implementation of evidence-based treatments into routine care service settings.

Schizophrenia is a chronic, severe, disabling brain disorder that affects more than 2 million Americans age 18 and older in a given year.⁷ To address this serious public health problem, NIMH launched the NIMH Recovery After an Initial Schizophrenia Episode (RAISE) Project, which seeks to intervene at the earliest stages of illness, in order to prevent long-term disability. The RAISE Project comprises two separate, but complementary, research programs. The RAISE Early Treatment Program (RAISE ETP), which has enrolled 400 patients with early psychosis, is a full-scale, randomized controlled trial comparing two different ways of providing treatment to people experiencing the early stages of schizophrenia and related disorders. Both types of treatment emphasize early intervention but feature different approaches for initiating and coordinating care. The RAISE Connection Program is identifying ways to effectively integrate a comprehensive early intervention program for schizophrenia and related disorders into existing medical care systems and how such programs benefit individuals receiving multi-element treatment. The two studies have the shared goals of improving clinical outcomes for patients and informing health care providers and payers of what could and should be done to avoid the long-term disability currently associated with chronic schizophrenia.

⁷ Regier DA, Narrow WE, Rae DS, Manderscheid RW, Locke BZ, Goodwin FK. The de facto mental and addictive disorders service system. Epidemiologic Catchment Area prospective 1-year prevalence rates of disorders and services. *Archives of General Psychiatry*. 1993 Feb;50(2):85-94.

Budget Policy: The FY 2014 President’s Budget estimate is \$153.839 million, an increase of \$2.274 million, or 1.5 percent above the FY 2012 Actual level.

Program Portrait: Reducing Mortality among People with Serious Mental Illness

FY 2012 Level: \$0.0 million

FY 2014 Level: \$2.9 million

Change: +\$2.9 million

Research has shown a striking disparity in life expectancy for the 11.4 million people in the U.S. with serious mental illness (SMI).¹ On average, Americans with SMI die between 11 to 32 years earlier than the general population.^{1,2} NIMH supports numerous studies, including co-sponsored research with other NIH Institutes and Centers, that aim to improve the general health of persons living with SMI and comorbid (i.e., co-occurring) physical illnesses. These studies cover a broad range of treatable conditions associated with SMI that harm the health of these individuals (e.g., nicotine addiction, diabetes, obesity, cardiovascular disease) and contribute to their premature mortality.

In FY 2012, NIMH convened the meeting “Research to Improve Health and Longevity of People with Severe Mental Illness,” in collaboration with the National Institute on Diabetes and Digestive and Kidney Diseases (NIDDK), the National Heart, Lung, and Blood Institute (NHLBI), the National Cancer Institute (NCI), and the National Institute on Drug Abuse (NIDA). The meeting brought together the leading researchers on medical comorbidities in people with SMI and on prevention and treatment within the general population for diabetes, heart disease, tobacco use, and drug abuse. They were joined by State policy leaders; advocates for people with SMI; leaders of community mental health centers; and representatives from key Federal agencies, including the Substance Abuse and Mental Health Services Administration (SAMHSA) and the Agency for Healthcare Research and Quality (AHRQ). The goal of the meeting was to identify critical research gaps and formulate the most pressing research questions in order to improve the health and longevity of people with SMI.

This meeting informed the development of a request for applications that will address SMI by building on strategies proven effective in reducing modifiable health risk factors in the general population. In FY 2013, NIMH anticipates funding several planning grants to support the evaluation of innovative health services models that aim to reduce the prevalence and magnitude of modifiable health risk factors related to shortened lifespan in people with SMI. At the conclusion of the one-year grant period, grantees should be positioned to conduct comprehensive empirical trials of their models’ effectiveness. In FY 2014, NIMH expects to fund research project grants to conduct trials that answer one or more of the following questions: (1) How can effective strategies to reduce health risk factors be adapted for people with SMI?; (2) How can capacity to deliver needed health care be significantly improved to reach the largest number of people with SMI?; (3) What strategies can best improve the implementation of effective health interventions for people with SMI? The results of these studies will inform system-level approaches for achieving large-scale delivery of integrated medical care to people with SMI.

¹ Druss BG, Zhao L, Von Esenwein S, et al. Understanding excess mortality in persons with mental illness: 17-year follow up of a nationally representative US survey. *Medical Care*. 2011; 49(6):599-604.

² Colton CW, Manderscheid RW. Congruencies in increased mortality rates, years of potential life lost, and causes of death among public mental health clients in eight states. *Preventing Chronic Disease*. 2006 Apr; 3(2):A42.

Program Portrait: Serving the Mental Health Needs of Service Members

FY 2012 Level: \$0.0 million

FY 2014 Level: \$3.0 million

Change: +\$3.0 million

Suicide is the 10th most frequent cause of death in the United States. Historically, the rate of suicide in the military has been lower than that for comparable groups of civilians. However, the number of suicides in the U.S. Army has been climbing in recent years, eclipsing the civilian rate with record numbers of soldiers taking their own lives. Recognizing that this is not only a military problem but also a national crisis, the Army Study to Assess Risk and Resilience in Service Members (Army STARRS) was launched in FY 2009.³ Army STARRS is a five-year collaborative partnership between the Department of the Army, NIMH, and several academic institutions that seeks to identify factors that both protect soldiers' mental health and those that put a soldier's mental health at risk. The ultimate goal of Army STARRS is to provide empirical evidence to help the Army develop targeted prevention and treatment strategies.

In FY 2012, Army STARRS reached a number of milestones, including establishing survey sites at more than 70 locations around the world, surveying more than 100,000 Soldiers, and collecting more than 56,000 blood samples. Both the *New Soldier Study*, designed to capture information about experiences soldiers bring into the Army, and the *All Army Study*, which provides a snap shot of the Army across ranks and all areas of service, are nearing completion. This past year, several new components were launched and Army STARRS established a data enclave that integrates the administrative records of the 1.6 million soldiers who served between 2004 and 2009. The enclave and its more than 1.1 billion pieces of data are part of a massive epidemiological approach to studying the complexities of soldiers' mental health.

Brain disorders are incredibly complex. The array of paths that lead to post-traumatic stress disorder and suicide are as diverse as the individuals affected. Army STARRS has shown that no single approach will yield the answers needed to solve these difficult problems. A recent White House Executive Order mandates Federal agencies to expand and integrate research on mental health and suicide prevention strategies.⁴ This Order provides a platform that will lead to more robust partnerships, capitalizing on the resources of multiple Federal departments and agencies, as well as the intellectual power of academic institutions. Army STARRS is an unprecedented example of how collaboration both within and outside of government is working to improve the lives of Service Members and civilians by developing better prevention, diagnosis, and treatment strategies.

³ Additional information about Army STARRS may be found at: <http://www.armystarrs.org/>

⁴ Full text of the Executive Order may be found at: <http://www.whitehouse.gov/the-press-office/2012/08/31/executive-order-improving-access-mental-health-services-veterans-service>

AIDS Research

The Division of AIDS Research supports research and research training to develop and disseminate behavioral interventions that prevent HIV/AIDS transmission; understand the factors that affect adherence to therapeutic or preventive regimens; clarify the biological, psychological, and functional mental health effects of HIV/AIDS infection; understand the neurological manifestations and complications of HIV; and alleviate those effects among infected and affected individuals.

Recent research advances in prevention using combined biomedical and behavioral approaches have generated tremendous optimism that a significant decrease in HIV incidence is achievable. NIMH fosters the effective integration of evidence-based behavioral science and combination biomedical strategies to achieve this goal. The Division continues to target scientifically sound behavioral research on testing and implementing novel interventions to prevent further spread of

HIV and optimize outcomes in HIV-infected individuals. The Division is supporting two new funding opportunity announcements (FOAs) to advance community level approaches to reduce HIV infection in highly impacted communities and to foster multidisciplinary studies on HIV/AIDS in the context of aging and/or older adults. Recent scientific advances have also spurred an increased effort to eliminate HIV in infected individuals, leading toward a cure. This would require elimination of the virus from biological reservoirs such as the central nervous system (CNS). To this end, the Division is supporting a FOA to stimulate research on understanding the mechanisms of viral latency (i.e., when the virus is present but not active) within the CNS and therapeutic strategies to clear the CNS of virus.

Budget Policy: The FY 2014 President's Budget estimate is \$152.054 million, a decrease of \$27.123 million, or 15.1 percent below the FY 2012 Actual level. This is due to a shift in NIMH resources to the NIAID AIDS program to accommodate the expansion of integrated scientific approaches necessary reach the goals of an "AIDS-free generation." Trans-NIH collaborations have been effective in the past; however, future complex combination studies are necessary to accelerate progress to new levels of effectiveness, and such studies will be facilitated by an integrated funding stream.

Intramural Research Programs (IRP)

The Division of Intramural Research Programs (DIRP) is the component of NIMH that directly conducts research, complementing the Institute's extramural grant funding program to the research community outside of NIH. DIRP scientists study brain function and behavior; translate discoveries into clinical innovations; and provide an environment conducive to the training of clinical and basic scientists.

In FY 2012, DIRP researchers participated in the creation of the first web-based atlas depicting how gene expression patterns change in the human brain throughout the lifespan.⁸ Also in FY 2012, DIRP scientists built on their findings that people with anxiety unconsciously pay more attention than others to anything that seems threatening and developed a computer-based therapy that helps ameliorate this reflexive response in children. NIMH DIRP researchers have also identified biological markers that may help predict which patients with depression will respond to rapid-acting antidepressants – information that may help clinicians personalize depression care for patients in the future.

Budget Policy: The FY 2014 President's Budget estimate is \$166.471 million, the same as the FY 2012 Actual level.

Research Management and Support (RMS)

The RMS program provides administrative, budgetary, logistical, and scientific support in the review, award, and monitoring of research grants, training awards, and research and development contracts. RMS functions include: strategic planning, coordination, and evaluation of the Institute's programs; regulatory compliance; international coordination; and liaison with other Federal agencies, Congress, and the public.

⁸ Kang HJ, Kawasawa YI, Cheng F, et al. Spatio-temporal transcriptome of the human brain. *Nature*. 2011 Oct 26;478(7370):483-9.

In FY 2012, the Institute oversaw 2,696 research grants, 389 training grants, and 149 research and development contracts. Moreover, in FY 2012, NIMH proactively completed four large-scale internal risk management reviews to examine and assess the effectiveness of management controls in four major areas of responsibility. The purpose of the NIMH Risk Management Program is to identify weaknesses and detect any potential fraud, waste, or abuse. NIMH continues to track implemented corrective action plans to improve internal policies and procedures.

Budget Policy: The FY 2014 President's Budget estimate is \$73.151 million, the same as the FY 2012 Actual level. The apparent increase in estimated FY 2014 FTE compared to the FY 2012 actual FTE usage level is due to the effect of transferring positions previously funded from a centralized support operation (Division of Extramural Activities Support) to individual ICs as of year-end 2012. As a result of the DEAS transfer, estimated salaries and benefits for FY 2014 are proportionately higher than those identified for FY 2012 and previous years.

NIH Collaborative Activities

NIMH participates in a variety of activities supported through the Common Fund, the Basic Behavioral and Social Sciences Opportunity Network (OPPNET) and the Neuroscience Blueprint. Among these, NIMH is the co-lead on five Common Fund projects: Molecular Libraries and Imaging, Genotype-Tissue Expression (GTEx), Health Care Systems (HCS) Collaboratory, Health Economics and Single Cell Analysis.

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Budget Authority by Object Class
(Dollars in Thousands)

	FY 2012 Actual	FY 2014 PB	Increase or Decrease
Total compensable workyears:			
Full-time employment	583	615	32
Full-time equivalent of overtime and holiday hours	0	0	0
Average ES salary (in whole dollars)	\$172,832	\$174,024	\$1,192
Average GM/GS grade	12.3	12.4	0.1
Average GM/GS salary (in whole dollars)	\$101,506	\$102,205	\$699
Average salary, grade established by act of July 1, 1944 (42 U.S.C. 207) (in whole dollars)	\$118,392	\$121,944	\$3,552
Average salary of ungraded positions (in whole dollars)	\$135,719	\$135,719	\$0
OBJECT CLASSES	FY 2012 Actual	FY 2014 PB	Increase or Decrease
Personnel Compensation:			
11.1 Full-time permanent	\$36,725	\$40,604	\$3,879
11.3 Other than full-time permanent	25,220	26,096	876
11.5 Other personnel compensation	1,064	1,151	87
11.7 Military personnel	251	272	21
11.8 Special personnel services payments	8,507	8,649	142
Total, Personnel Compensation	\$71,769	\$76,772	\$5,003
12.0 Personnel benefits	\$18,487	\$19,798	\$1,311
12.2 Military personnel benefits	99	108	9
13.0 Benefits for former personnel	0	0	0
Subtotal, Pay Costs	\$90,355	\$96,678	\$6,323
21.0 Travel and transportation of persons	\$2,287	\$2,287	\$0
22.0 Transportation of things	173	174	1
23.1 Rental payments to GSA	0	0	0
23.2 Rental payments to others	2	2	(0)
23.3 Communications, utilities and miscellaneous charges	1,457	1,458	1
24.0 Printing and reproduction	192	192	0
25.1 Consulting services	2,493	2,501	8
25.2 Other services	31,155	25,484	(5,671)
25.3 Purchase of goods and services from government accounts	137,788	145,873	8,085
25.4 Operation and maintenance of facilities	1,147	1,147	0
25.5 Research and development contracts	19,809	11,934	(7,875)
25.6 Medical care	230	230	0
25.7 Operation and maintenance of equipment	2,443	2,444	1
25.8 Subsistence and support of persons	0	0	0
25.0 Subtotal, Other Contractual Services	\$195,065	\$189,613	(\$5,452)
26.0 Supplies and materials	\$5,375	\$5,375	\$0
31.0 Equipment	3,737	3,738	1
32.0 Land and structures	0	0	0
33.0 Investments and loans	0	0	0
41.0 Grants, subsidies and contributions	1,178,872	1,166,265	(12,607)
42.0 Insurance claims and indemnities	0	0	0
43.0 Interest and dividends	0	0	(0)
44.0 Refunds	0	0	0
Subtotal, Non-Pay Costs	\$1,387,161	\$1,369,104	(\$18,057)
Total Budget Authority by Object Class	\$1,477,516	\$1,465,782	(\$11,734)

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

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Salaries and Expenses
(Dollars in Thousands)

OBJECT CLASSES	FY 2012 Actual	FY 2014 PB	Increase or Decrease
Personnel Compensation:			
Full-time permanent (11.1)	\$36,725	\$40,604	\$3,879
Other than full-time permanent (11.3)	25,220	26,096	876
Other personnel compensation (11.5)	1,064	1,151	87
Military personnel (11.7)	251	272	21
Special personnel services payments (11.8)	8,507	8,649	142
Total Personnel Compensation (11.9)	\$71,767	\$76,772	\$5,005
Civilian personnel benefits (12.1)	\$18,487	\$19,798	\$1,311
Military personnel benefits (12.2)	99	108	9
Benefits to former personnel (13.0)	0	0	0
Subtotal, Pay Costs	\$90,353	\$96,678	\$6,325
Travel (21.0)	\$2,287	\$2,287	\$0
Transportation of things (22.0)	173	174	1
Rental payments to others (23.2)	2	2	0
Communications, utilities and miscellaneous charges (23.3)	1,457	1,458	1
Printing and reproduction (24.0)	192	192	0
Other Contractual Services:			
Advisory and assistance services (25.1)	2,493	2,501	8
Other services (25.2)	31,155	25,484	(5,671)
Purchases from government accounts (25.3)	95,420	96,144	724
Operation and maintenance of facilities (25.4)	1,147	1,147	0
Operation and maintenance of equipment (25.7)	2,443	2,444	1
Subsistence and support of persons (25.8)	0	0	0
Subtotal Other Contractual Services	\$132,658	\$127,720	(\$4,938)
Supplies and materials (26.0)	\$5,224	\$5,224	\$0
Subtotal, Non-Pay Costs	\$141,993	\$137,057	(\$4,936)
Total, Administrative Costs	\$232,346	\$233,735	\$1,389

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

OFFICE/DIVISION	FY 2012 Actual			FY 2013 CR			FY 2014 PB		
	Civilian	Military	Total	Civilian	Military	Total	Civilian	Military	Total
Office of the Director									
Direct:	106	-	106	122	-	122	122	-	122
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	106	-	106	122	-	122	122	-	122
Division of Neuroscience and Basic Behavioral Science									
Direct:	26	-	26	26	-	26	26	-	26
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	26	-	26	26	-	26	26	-	26
Division of AIDS Research									
Direct:	12	-	12	15	-	15	15	-	15
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	12	-	12	15	-	15	15	-	15
Division of Services and Intervention Research									
Direct:	18	1	19	20	1	21	20	1	21
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	18	1	19	20	1	21	20	1	21
Division of Adult Translational Research and Treatment Development									
Direct:	16	-	16	19	-	19	19	-	19
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	16	-	16	19	-	19	19	-	19
Division of Developmental Translational Research									
Direct:	14	-	14	17	-	17	17	-	17
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	14	-	14	17	-	17	17	-	17
Division of Extramural Activities									
Direct:	40	-	40	45	-	45	45	-	45
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	40	-	40	45	-	45	45	-	45
Division of Intramural Research Programs									
Direct:	349	1	350	349	1	350	349	1	350
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	349	1	350	349	1	350	349	1	350
Total	581	2	583	613	2	615	613	2	615
Includes FTEs whose payroll obligations are supported by the NIH Common Fund. FTEs supported by funds from Cooperative Research and Development Agreements.									
FISCAL YEAR	Average GS Grade								
2010	12.1								
2011	12.1								
2012	12.3								
2013	12.3								
2014	12.4								

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Detail of Positions

GRADE	FY 2012 Actual	FY 2013 CR	FY 2014 PB
Total, ES Positions	1	1	1
Total, ES Salary	172,832	172,832	174,024
GM/GS-15	54	54	54
GM/GS-14	72	72	72
GM/GS-13	92	92	92
GS-12	67	68	68
GS-11	57	57	57
GS-10	2	2	2
GS-9	31	34	34
GS-8	13	24	24
GS-7	6	18	18
GS-6	3	6	6
GS-5	1	1	1
GS-4	2	2	2
GS-3	1	1	1
GS-2	0	0	0
GS-1	0	0	0
Subtotal	401	431	431
Grades established by Act of July 1, 1944 (42 U.S.C. 207):			
Assistant Surgeon General	2	2	2
Director Grade	0	0	0
Senior Grade	0	0	0
Full Grade	0	0	0
Senior Assistant Grade	0	0	0
Assistant Grade	0	0	0
Subtotal	2	2	2
Ungraded	0	0	0
Total permanent positions	403	435	435
Total positions, end of year	591	602	602
Total full-time equiv (FTE) at YE	583	615	615
Average ES salary	172,832	172,832	174,024
Average GM/GS grade	12.3	12.3	12.4
Average GM/GS salary	101,506	101,506	102,205

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