

DEPARTMENT OF HEALTH AND HUMAN SERVICES

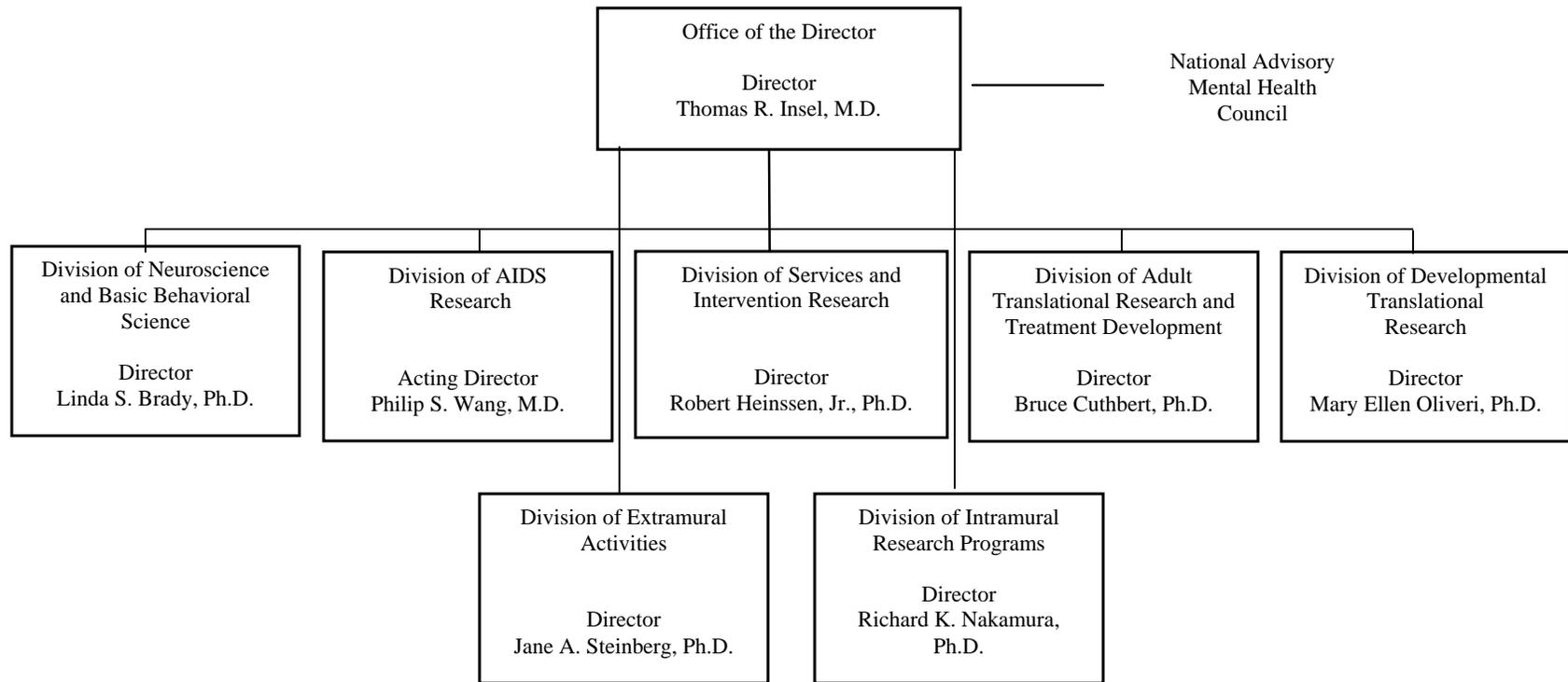
NATIONAL INSTITUTES OF HEALTH

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 Public Health Services Act with respect to mental health \$1,517,006,000.

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

Amounts Available for Obligation ¹
(Dollars in Thousands)

Source of Funding	FY 2010 Actual	FY 2011 CR	FY 2012 PB
Appropriation	1,489,372	1,489,372	1,517,006
Type 1 Diabetes	0	0	0
Rescission	0	0	0
Supplemental	0	0	0
Subtotal, adjusted appropriation	1,489,372	1,489,372	1,517,006
Real transfer under Director's one-percent transfer authority (GEI)	3,361	0	0
Real Transfer from DHHS for Autism	1,000	1,000	0
Real transfer under Secretary's one-percent transfer authority	(223)	0	0
Comparative Transfers to NLM for NCBI and Public Access	(609)	(1,267)	0
Comparative transfer under Director's one-percent transfer authority (GEI)	(3,361)	0	0
Subtotal, adjusted budget authority	1,489,540	1,489,105	1,517,006
Unobligated balance, start of year	0	0	0
Unobligated balance, end of year	0	0	0
Subtotal, adjusted budget authority	1,489,540	1,489,105	1,517,006
Unobligated balance lapsing	0	0	0
Total obligations	1,489,540	1,489,105	1,517,006

¹ Excludes the following amounts for reimbursable activities carried out by this account:
FY 2010 - \$14,951 FY 2011 - \$15,000 FY 2012 - \$15,000

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

MECHANISM	FY 2010 Actual		FY 2011 CR		FY 2012 PB		Change vs. FY 2010	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Research Grants								
Research Projects								
Noncompeting	1,546	\$644,737	1,579	\$680,559	1,563	\$687,568	17	\$42,831
Administrative Supplements	(72)	10,624	(72)	10,613	(71)	10,540	1	(84)
Competing:								
Renewal	108	59,135	90	50,043	91	51,078	(17)	(8,057)
New	444	172,076	375	148,361	377	150,592	(67)	(21,484)
Supplements	3	1,122	2	1,001	2	1,023	(1)	(99)
Subtotal, Competing	555	\$232,333	467	\$199,405	470	\$202,693	(85)	(\$29,640)
Subtotal, RPGs	2,101	\$887,694	2,046	\$890,577	2,033	\$900,801	(68)	\$13,107
SBIR/STIR	90	\$33,459	88	\$32,520	89	\$33,162	(1)	(\$297)
Research Project Grants	2,191	\$921,153	2,134	\$923,097	2,122	\$933,963	(69)	\$12,810
Research Centers								
Specialized/Comprehensive	64	\$109,670	64	\$109,670	64	\$110,767	0	\$1,097
Clinical Research	0	0	0	0	0	0	0	0
Biotechnology	0	1,000	0	1,000	0	1,010	0	10
Comparative Medicine	0	0	0	0	0	0	0	0
Research Centers in Minority Institutions	0	0	0	0	0	0	0	0
Research Centers	64	\$110,670	64	\$110,670	64	\$111,777	0	\$1,107
Other Research								
Research Careers	396	\$62,282	396	\$62,282	396	\$62,905	0	\$623
Cancer Education	0	0	0	0	0	0	0	0
Cooperative Clinical Research	0	485	0	485	0	490	0	5
Biomedical Research Support	0	0	0	0	0	0	0	0
Minority Biomedical Research Support	0	0	0	0	0	0	0	0
Other	114	31,585	114	31,585	114	31,901	0	316
Other Research	510	\$94,352	510	\$94,352	510	\$95,296	0	\$944
Total Research Grants	2,765	\$1,126,175	2,708	\$1,128,119	2,696	\$1,141,036	(69)	\$14,861
Research Training								
Individual Awards	305	\$11,545	305	\$11,706	305	\$12,034	0	\$489
Institutional Awards	680	31,751	680	32,205	680	33,125	0	1,374
Total Research Training	985	\$43,296	985	\$43,911	985	\$45,159	0	\$1,863
Research & Development Contracts (SBIR/STTR)	140	\$72,377	140	\$72,000	140	\$83,285	0	\$10,908
	(2)	(\$1,119)	(2)	(\$1,119)	(2)	(\$1,119)	0	\$0
Intramural Research	370	\$174,895	368	\$169,895	368	\$171,594	(2)	(\$3,301)
Research Management and Support	250	72,797	255	75,180	255	75,932	5	3,135
Construction		0		0		0		0
Buildings and Facilities		0		0		0		0
Total, NIMH	620	\$1,489,540	623	\$1,489,105	623	\$1,517,006	3	\$27,466

1/ All items in italics are "non-adds"; items in parenthesis are subtractions

Major Changes in the Fiscal Year 2012 Budget Request

Major changes by budget mechanism and/or budget activity detail are briefly described below. Note that there may be overlap between budget mechanism and activity detail and these highlights will not sum to the total change for the FY 2012 budget request for NIMH, which is \$27.466 million over the FY 2010 enacted level, for a total of \$1,517.006 million.

Research Project Grants (RPGs) (+\$12.810 million; total \$933.963 million): NIMH will fund 470 competing RPGs in FY 2012, a decrease of 85 over FY 2010. About 1,563 noncompeting RPG awards, totaling \$687.568 million also will be made in FY 2012.

Adult Translational Research and Treatment Development Program (+\$5.986 million; total \$277.796 million): Traditional categories of mental disorders (e.g., depression, schizophrenia) often share some similar characteristics. For example, anhedonia (an inability to experience pleasure) is seen across multiple mental disorders. NIMH has been working to develop a new classification framework that cuts across traditional diagnostic categories by examining these basic dimensions of functioning on multiple levels (i.e., genes, brain circuitry, behaviors). NIMH will continue to support research into the underlying mechanisms of mental disorders using a classification of patient participants based on basic biological dimensions of functioning, instead of the traditional categories of mental disorders.

Developmental Translational Research Program (+\$3.516 million; total \$163.173 million): New research findings from the field of neuroscience are not always immediately used to help develop and refine treatments for mental disorders. Additionally, there is growing evidence that talk therapy treatments that work are effective because they successfully alter brain circuitry in beneficial ways. NIMH will support research that helps to speed-up the use of emerging findings from research on neuroscience into new and improved treatment approaches for people with mental disorders.

Services and Intervention Research Program (+\$3.751 million; total \$174.064 million): Although successful and well-studied behavioral treatments for many mental disorders exist, research shows that many therapists do not deliver these evidence-based behavioral treatments as intended by the treatments' developers. By not strictly adhering to an evidence-based behavioral treatment's practices, therapists may inadvertently reduce or eliminate the therapy's effectiveness. To address this issue, NIMH will support research that enhances community-based therapists' fidelity to evidence-based behavioral treatments for mental disorders, with the ultimate goal of improving their effectiveness.

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

FY 2010 Actual				\$1,489,540
FY 2012 Estimate				1,517,006
Net change				\$27,466
CHANGES	2012 Estimate		Change from FY 2010 Base	
	FTEs	Budget Authority	FTEs	Budget Authority
A. Built-in:				
1. Intramural Research:				
a. Annualization of January 2010 pay increase				
		\$64,778		\$393
b. January FY 2012 pay increase				
		64,778		0
c. One less day of pay (n/a for 2011)				
		64,778		(250)
d. Payment for centrally furnished services				
		31,574		313
e. Increased cost of laboratory supplies, materials, and other expenses				
		75,242		736
Subtotal				\$1,192
2. Research Management and Support:				
a. Annualization of January 2010 pay increase				
		\$36,666		\$217
b. January FY 2012 pay increase				
		36,666		0
c. One less day of pay (n/a for 2011)				
		36,666		(142)
d. Payment for centrally furnished services				
		11,028		109
e. Increased cost of laboratory supplies, materials, and other expenses				
		28,238		275
Subtotal				\$459
Subtotal, Built-in				\$1,651

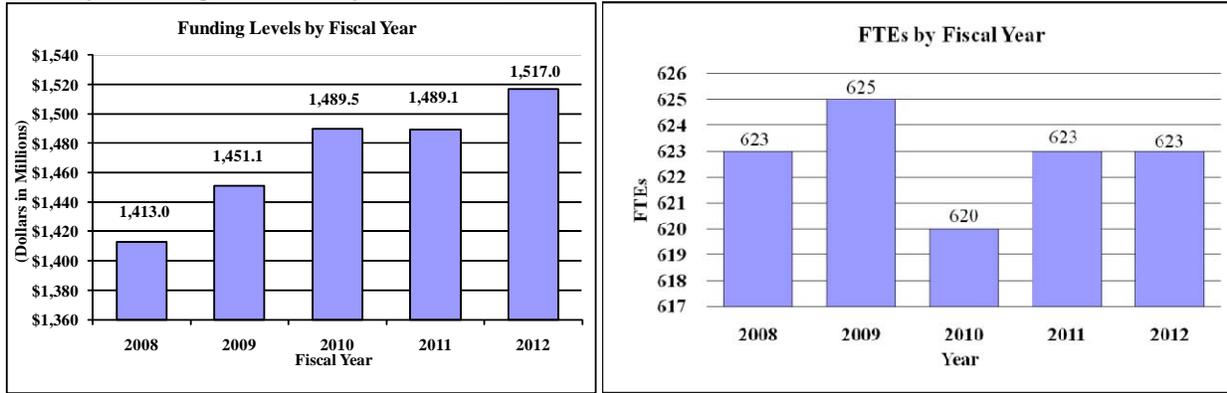
NATIONAL INSTITUTES OF HEALTH
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Summary of Changes--continued

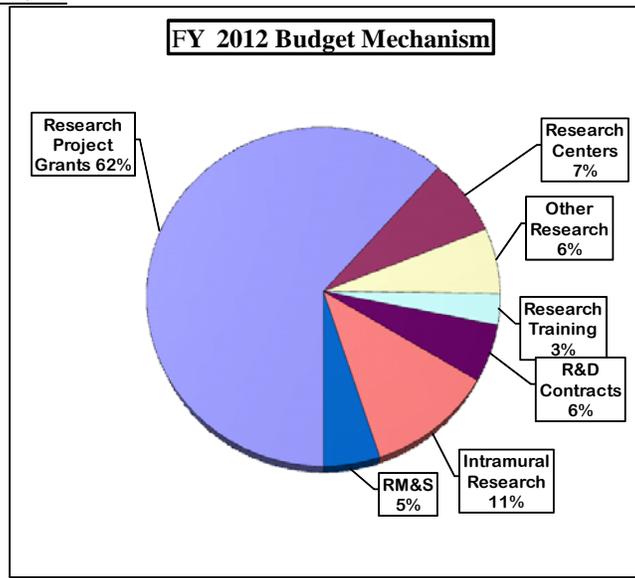
CHANGES	2012 Estimate		Change from FY 2010 Base	
	No.	Amount	No.	Amount
B. Program:				
1. Research Project Grants:				
a. Noncompeting	1,563	\$698,108	17	\$42,747
b. Competing	470	202,693	(85)	(29,640)
c. SBIR/STTR	89	33,162	(1)	(297)
Total	2,122	\$933,963	(69)	\$12,810
2. Research Centers	64	\$111,777	0	\$1,107
3. Other Research	510	95,296	0	944
4. Research Training	985	45,159	0	1,863
5. Research and development contracts	140	83,285	0	10,908
Subtotal, Extramural		\$1,269,480		\$27,632
6. Intramural Research	<u>FTEs</u> 368	\$171,594	<u>FTEs</u> (2)	(3,301)
7. Research Management and Support	255	75,932	5	3,135
8. Construction		0		0
9. Buildings and Facilities		0		0
Subtotal, program		\$1,517,006		\$25,815
Total changes	623		3	\$27,466

Fiscal Year 2012 Budget Graphs

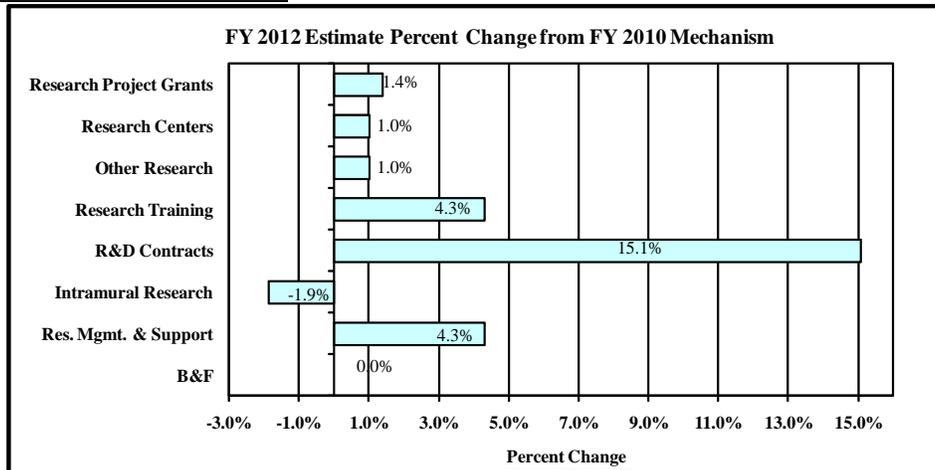
History of Budget Authority and FTEs:



Distribution by Mechanism:



Change by Selected Mechanisms:



NATIONAL INSTITUTES OF HEALTH
National Institute of Mental Health
Budget Authority by Activity
(Dollars in thousands)

	FY 2010 Actual		FY 2011 CR		FY 2012 PB		Change vs. FY 2010	
	FTEs	Amount	FTEs	Amount	FTEs	Amount	FTEs	Amount
Extramural Research								
Detail:								
Health, Behavior & AIDS Research ^{3/}		\$0		\$0		\$0		
AIDS Research ^{3/}		179,815		179,779		184,058		4,243
Adult Translational Research & Treatment Development		271,810		272,378		277,796		5,986
Developmental Translational Research		159,657		159,990		163,173		3,516
Neuroscience & Basic Behavioral Science		460,253		461,214		470,389		10,136
Services & Intervention Research		170,313		170,669		174,064		3,751
Subtotal, Extramural		\$1,241,848		\$1,244,030		\$1,269,480		\$27,632
Intramural Research	370	\$174,895	368	\$169,895	368	\$171,594	(2)	(\$3,301)
Research Management & Support	250	\$72,797	255	\$75,180	255	\$75,932	5	\$3,135
TOTAL	620	\$1,489,540	623	\$1,489,105	623	\$1,517,006	3	\$27,466

1. Includes FTEs which are reimbursed from the NIH Common Fund for Medical Research.

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

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

Authorizing Legislation

	PHS Act/ Other Citation	U.S. Code Citation	2011 Amount Authorized	FY 2010 Estimate	2012 Amount Authorized	FY 2012 PB
Research and Investigation	Section 301	42§241	Indefinite	\$1,489,540,000	Indefinite	\$1,517,006,000
	Section 401(a)	42§281	Indefinite		Indefinite	
National Institute of Mental Health						
Total, Budget Authority				\$1,489,540,000		\$1,517,006,000

NATIONAL INSTITUTES OF HEALTH
National Institute of Mental Health

Appropriations History

Fiscal Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
2003	\$1,359,008,000	\$1,359,008,000	\$1,350,788,000	\$1,349,788,000
Rescission				(\$8,774,000)
2004	\$1,382,114,000	\$1,382,114,000	\$1,391,114,000	\$1,390,714,000
Rescission				(\$8,940,000)
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				\$0
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				\$0
2010	\$1,474,676,000	\$1,502,266,000	\$1,475,190,000	\$1,489,372,000
Rescission				\$0
2011	\$1,540,345,000		\$1,537,942,000	
Rescission				
2012	\$1,517,006,000			

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 2010	FY 2011	FY 2012	FY 2012 +/-
	<u>Actual</u>	<u>Continuing Resolution</u>	<u>Budget Request</u>	<u>2010</u>
BA	1,489,540,000	\$1,489,105,000	\$1,517,006,000	+\$27,466,000
<u>FTE</u>	620	623	623	+3

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. In a given year, an estimated 13 million American adults (approximately 1 in 17) suffer from a seriously debilitating mental illness.^{1,2} Mental disorders are the leading cause of disability in the United States and Canada, accounting for 24 percent of all years of life lost to disability and premature mortality (Disability Adjusted Life Years or DALYs).³ Moreover, suicide is the tenth leading cause of death in the United States, accounting for the loss of more than 34,000 American lives each year.⁴ The costs associated with these disorders are tremendous, both in terms of the toll they take on individuals and their families, as well as the financial burden they place on the country as a whole. A conservative estimate places the financial costs associated with serious mental illness at well over \$300 billion annually.⁵

Schizophrenia, bipolar disorder, depression, autism spectrum disorder, post-traumatic stress disorder, eating disorders, borderline personality disorder, and other disorders are serious, life-threatening illnesses for which we need more reliable diagnostic tests, more effective treatments,

¹ Kessler RC, Chiu WT, Demler O, Merikangas KR, Walters EE. Prevalence, severity, and comorbidity of twelve-month DSM-IV disorders in the National Comorbidity Survey Replication (NCS-R). *Archives of General Psychiatry*, 2005 Jun;62(6):617-27. PMID: 15939839

² U.S. Census Bureau Population Estimates by Demographic Characteristics. Table 2: Annual Estimates of the Population by Selected Age Groups and Sex for the United States: April 1, 2000 to July 1, 2004 (NC-EST2004-02) Source: Population Division, U.S. Census Bureau Release Date: June 9, 2005.

³ 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.

⁴ 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 November 2010.

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

and improved strategies for prevention. These innovations require a solid foundation formed on rigorous scientific research.

In FY 2011 and FY 2012, NIMH will further accelerate mental health research, guided by its Strategic Plan. This next generation of research is aimed not only at expanding our understanding of the brain and the causes of brain disorders, but also toward generating knowledge that will enable tangible improvements in the lives of people living with and affected by mental illness. To advance these goals, NIMH will support research initiatives that are truly sweeping in scope, ranging from basic genomics to the delivery and quality of mental health care.

Technologies to Accelerate Discovery Over the past several years, the technology used in genomics research has progressed at an astounding pace, and has been matched with equally impressive reductions in cost. NIMH recognizes the opportunities this creates, and supports research that uses these new approaches to study the brain and mental disorders in ways that are truly transformative. In FY 2011 and FY 2012, for example, NIMH will continue to support the development of a gene expression atlas of the human brain. Relatively little is known about how specific genes associated with a greater risk for mental disorders affect brain development, or which risk gene variants influence gene expression throughout the lifespan. Using state of the art high throughput sequencing technology that is able to analyze thousands of DNA sequences at once, collaborative teams of researchers are developing a brain "transcriptome," or atlas, that identifies the composition of transcripts, the copies of DNA our bodies use as blueprints to build molecules. This project will collect data from a range of developmental time points--from children at birth to adults up to age 60. The insight into normal patterns of gene expression that will result from this project will provide an invaluable baseline for future studies of the genetic underpinnings of mental illness for all age groups.

Re-engineering the Therapeutic Development Pipeline Discoveries in basic science are exciting not only for the knowledge they generate, but for the opportunities they present to improve the lives of people with mental illness through the development of new treatments, and improvements to existing ones. NIMH supports a broad range of research to bridge the gap between basic research and treatment, from improving and personalizing preventive interventions to undertaking medication safety and efficacy research. In FY 2012, NIMH will continue to support the National Cooperative Drug Discovery and Development Groups for the Treatment of Mental Disorders (NCDDDG) program, which encourages public-private partnerships to accelerate the discovery of medications targeting the biological mechanisms associated with mental disorders. For example, through NCDDDG, NIMH will support a research project that brings together basic and clinical expertise at three universities, the NIMH Intramural Research Program, and the private sector to examine the efficacy of a new drug that may be effective in reducing the symptoms associated with post-traumatic stress disorder.

Enhancing the Evidence Base for Health Care Decisions The basic and translational research supported by NIMH can only impact the Nation's public health if it ultimately leads to improved treatment. NIMH supports a broad portfolio of services and intervention research designed to overcome the many challenges to providing optimal mental health care. For example, while effective behavioral treatments for mental disorders exist, many patients in community settings

do not receive them, in part because clinicians vary in how closely they adhere to evidence-based treatment protocols. As with most illnesses, empirically tested treatments for mental illnesses often contain many components, and if a clinician chooses to use only one portion of a treatment, they may reduce its positive effects. Therefore, in FY 2012, NIMH will support research into how to enhance and maintain community-based care providers' fidelity to empirically supported behavioral treatments for mental disorders. Ultimately, improvements to treatment fidelity will translate into better outcomes for people who use community-based mental health services.

New Investigators, New Ideas In order to ensure continued high caliber mental health research spanning basic genomics to mental health services, NIMH is working to reinvigorate the research community and fuel the next generation of mental health researchers. In FY 2012, NIMH will continue to support research through the Biobehavioral Research Awards for Innovative New Scientists (BRAINS) program, which supports the career development of outstanding young scientists who are making a long-term career commitment to mental health research. NIMH remains committed to expanding opportunities for researchers from diverse backgrounds and in FY 2012 will support a new initiative that leverages existing career development networks in order to increase racial and ethnic diversity within the field of mental health research.

Overall Budget Policy: The FY 2012 request for NIMH is \$1,517.006 million, an increase of \$27.466 million, or 1.8 percent, over the FY 2010 Enacted Level. NIMH will continue to maintain competing RPGs in order to further the research priorities of the NIMH Strategic Plan. NIMH is providing a 1 percent inflationary increase for non-competing and competing grants in FY 2012. This builds upon a 2 percent inflationary increase for competing grants in FY 2011. In FY 2012, NIMH will support new investigators on R01 equivalent awards at success rates equivalent to those of established investigators submitting new R01 equivalent applications. NIMH will provide an increase in FY 2012 of 4 percent for stipend levels under the Ruth L. Kirschstein National Research Service Award (NRSA) training program, to continue the efforts to attain the stipend levels recommended by the National Academy of Sciences. This builds on the 2 percent increase in stipend levels for FY 2011. NRSA stipend levels were nearly flat for several years, and the requested increase will help to sustain the development of a highly qualified biomedical research workforce. In addition, NIMH has targeted a portion of the funds available for competing research project grants to support high priority projects outside of the payline, including awards to new investigators, and early stage investigators. Increases to Research Management and Support will provide for a modest program growth. Funds are included in R&D contracts to reflect NIMH's share of NIH-wide funding required to support several trans-NIH initiatives, such as the Therapies for Rare and Neglected Diseases program (TRND), the Basic Behavioral and Social Sciences Opportunity Network (OppNet), and support for a new synchrotron at the Brookhaven National Laboratory. For example, each IC that will benefit from the new synchrotron will provide funding to total NIH's commitment to support this new technology - \$10 million.

Program Descriptions and Accomplishments

AIDS Research⁶: The AIDS research program supports research and research training to: develop and disseminate behavioral interventions that prevent HIV/AIDS transmission; clarify the biological, psychological, and functional mental health effects of HIV/AIDS infection; and, alleviate the associated consequences. In FY 2012, NIMH will support research to address the primary goals of the National HIV/AIDS Strategy (NHAS) released in July 2010, to reduce HIV incidence, increase access to care and optimize health outcomes, and reduce HIV-related health disparities. In order to notify researchers of its interest in the area, NIMH will issue two new Funding Opportunity Announcements (FOAs) in FY 2011 to expand intervention research, targeting populations with the highest risk for HIV infection. NIMH is partnering with other NIH Institutes, as well as the Centers for Disease Control and Prevention, to better integrate behavioral science into biomedical strategies to prevent HIV infection. NIMH also will focus research on the neural mechanisms of HIV-related behavioral and cognitive consequences and developing therapeutic strategies to treat these complications. An FOA to study the genetic basis of HIV-associated neurocognitive disorders has been issued, as has an FOA for developing novel therapies to address HIV-associated central nervous system disease.

Budget Policy: The FY 2012 budget estimate for this program is \$184.058 million, an increase of \$4.243 million or +2.4 percent over FY 2010. FY 2012 program plans will emphasize innovative, interdisciplinary HIV prevention research designed to better understand individual, community, social, and structural factors that impact HIV risk-reduction in order to improve preventive behaviors. The program will further support innovative, interdisciplinary prevention science research that examines the psychosocial needs of children affected by AIDS, particularly children in low-resource settings. NIMH will support studies to assess the neurologic, neuropsychiatric, and neuropathologic consequences of HIV in the current therapeutic context, particularly in international and resource-poor settings, in order to develop new therapeutic interventions to prevent or reverse these complications.

Adult Translational Research and Treatment Development: This program 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. The program supports a broad research portfolio, which includes studies of the risk factors for major psychiatric disorders; clinical neuroscience studies to elucidate causes and functional effects of these disorders; and research on psychosocial, pharmacological, and somatic treatment development. In FY 2010, this program helped to identify biosignatures (i.e. multiple biological indicators) that predict response to treatment for major depression, in an effort to provide more personalized approaches to therapy for this highly prevalent disorder. The program also will support early-phase trials to evaluate new, rapidly-acting treatments for major depression. Recent research findings with compounds, such as ketamine, and behavioral procedures, such as sleep deprivation, provide the basis for developing new interventions that have fewer side effects and longer lasting treatment effects.

⁶ The Health and Behavior components of the Division of AIDS and Health and Behavior Research have been dissolved. The Health and Behavior components have been absorbed by the other NON-AIDS Research divisions.

Budget Policy: The FY 2012 budget estimate for this program is \$277.796 million, an increase of \$5.986 million or +2.2 percent over FY 2010. High priority will be given to studies that advance the understanding of the biological underpinnings of mental illness and hasten the translation of behavioral science and neuroscience advances into innovations in clinical care. Program plans include the development of models to predict the treatment response and vulnerability to side effects of medications for mental disorders, and will support studies on the prevention or amelioration of treatment-related side effects. In FY 2012, the program will emphasize studies evaluating the safety and efficacy of novel pharmacological agents and behavioral interventions that target features of mental illness that are inadequately addressed by current therapies and prevention strategies.

Program Portrait: Improving the Classification and Treatment of Mental Disorders

FY 2010 Level: \$4.348 million
FY 2012 Level: 7.181 million
Change: +2.833 million

Mental disorders are common in the United States. Approximately 6 percent of American adults suffer from seriously debilitating mental disorders each year. Many people suffer from more than one disorder at a time; in fact nearly half of those with any mental disorder meet criteria for two or more disorders. The high-prevalence of co-occurring disorders can make diagnosis difficult and can limit the clinical impact of research findings, which can be difficult to interpret within the current diagnostic framework. Some groups of patients seem to share common symptoms that actually have different causes, while others may have different symptoms but their problems are traceable to the same underlying causes. Evidence of overlapping genetics and implicated brain circuitry across traditional categories is mounting. For example, a recent large-scale analysis points to a particular genetic variation associated with both bipolar disorder and depression. Therefore, traditional, symptom-based categories make it difficult to relate diagnosis to genes, particular brain circuits, or aspects of behavior.

To address these issues NIMH has recently launched the Research Domain Criteria (RDoC) project, a long-term initiative aimed at improving treatment and prevention by studying the classification of mental illness based on genetics and neuroscience in addition to traditional clinical observation. RDoC supported studies will take a non-conventional approach to selecting study samples. Rather than the usual diagnostic categories for mental disorders, participants will be selected on the basis of similar problems and will include people with multiple disorders who are typically excluded from studies but are more typical of “real world” settings. RDoC has the potential to yield a new classification system based on a deep understanding of the underlying causes of mental disorders, integrating the latest neuroscience research with clinical diagnosis and treatment and accelerating the public health impact of mental health research.

Developmental Translational Research: This program supports research and research training with the ultimate goal of preventing and curing mental disorders that originate in childhood and adolescence. The program stimulates and promotes an integrated program of research across basic behavioral and psychological processes (i.e., those not related specifically to disorder), environmental processes, brain development, genetics, developmental psychopathology, and therapeutic interventions. The program’s mission is to translate the findings from basic research into an improved understanding of the developmental origins of mental disorders in order to facilitate their prevention and cure. This goal will be accomplished through the integration of research on neurobehavioral mechanisms of psychopathology; understanding of the trajectories

of risk/ and illness; and, the design and testing of innovative and personalized treatments. In FY 2010, the program issued an FOA titled, "Identification and Characterization of Sensitive Periods for Neurodevelopment in Studies of Mental Illness." This FOA solicited applications for research studies investigating the role of sensitive periods (i.e. periods during which the developing brain is maximally sensitive to environmental influences that confer risk or resilience) in the development of cognitive or affective function and behaviors relevant to mental health disorders. The studies funded through this FOA address a broad range of topics and will further our understanding of the neurodevelopmental trajectories associated with schizophrenia, depression, anxiety disorders, bipolar disorder, eating disorders, and early life adversity.

Budget Policy: The FY 2012 budget estimate for this program is \$163.173 million, an increase of \$3.516 million or +2.2 percent over FY 2010. Priority will be given to studies that delineate the neurobehavioral mechanisms responsible for the development of mental disorders, including the identification of critical and sensitive periods in brain development and the effects of behavior and experience on brain function. In FY 2012, NIMH will also support research that speeds the translation of emerging findings from neuroscience into novel treatment approaches, as well as research that identifies the trajectories of brain, cognitive and emotional development in children at risk for serious mental disorders so that earlier interventions may be developed to prevent the onset of disease.

Program Portrait: Autism Spectrum Disorders Research

FY 2010 Level: \$88.548 million
FY 2012 Level: 90.230 million
Change: \$ + 1.682 million

Researchers, clinicians, and families all agree that autism spectrum disorder (ASD) is an urgent public health challenge, with enormous financial and societal costs. Matching the increasing public health urgency, NIH research funding for ASD has increased progressively over the past decade. The Interagency Autism Coordinating Committee's (IACC's) Strategic Plan for Autism Spectrum Disorder Research, released in January 2009 and updated in January 2010, provides a framework to guide federal efforts in ASD research. Several NIH initiatives address the research objectives outlined in the Plan, and two examples are highlighted below:

Through FY 2012, NIMH will support a contract to study the health outcomes of children with ASD and their families. The study will be the first of its kind to analyze existing administrative medical claims data to describe health outcomes and the utilization of health care services among children with ASD and their families compared with demographically matched control families. The project will also assess the utility of these types of data for future studies examining potential risk factors for and the consequences of ASD. This study will address a significant gap in current knowledge about the health trajectories and the utilization of health care services among children with ASD, their siblings, and their parents.

NIH will also continue to build its investment in ASD research through support for the Autism Centers of Excellence (ACE) program. The ACE program, which comprises 11 research centers and networks at major research institutions across the country, focuses on identifying the causes of ASD and developing new and improved treatments. Initially funded in FY 2007 and FY 2008, these centers will be supported through FY 2013. NIH staff members are currently planning an FOA to renew the ACE program in FY 2012. All ACE award recipients, as well as other ASD investigators, are contributing their data to the National Database for Autism Research (NDAR), a bioinformatics system for data collection, sharing, and analysis. Recently, data from more than 10,000 ASD research participants was made available to investigators for further study. Through investments in NDAR, NIH is working to address the complex data sharing needs of ASD researchers, which is a cross-cutting theme highlighted in the IACC Strategic Plan.

Neuroscience and Basic Behavioral Science: This program 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 programs in NIMH and the research community, this program ensures that relevant basic scientific knowledge is generated and used to improve diagnosis, treatment, and prevention of mental and behavioral disorders. Many mental disorders are first diagnosed in adolescents or young adults, indicating that these mental disorders may be disorders of brain development. Understanding the normal trajectory of brain development and the genes that shape these processes will be critical for identifying when and how developmental trajectories are changed in mental disorders. Therefore, in FY 2010, NIMH issued an FOA to encourage the research community to study how changes in the environment during development can cause long-term changes in which genes are turned on or off in different brain areas. A second FOA encourages the development of tests to study a large number of cells simultaneously in order to learn how changes in the genes of brain cells change how those cells work. Studies supported in response to these FOAs will present data that will inform studies of function and dysfunction in the developing human brain that contribute to attention deficit hyperactivity disorder (ADHD), schizophrenia, autism spectrum disorders, and depression.

Budget Policy: The FY 2012 budget estimate for this program is \$470.389 million, an increase of \$10.136 million or +2.2 percent over FY 2010. Priority will be given to projects that seek to understand the biological functions of genes, gene products, cells, and brain circuits in normal and abnormal mental function. Program plans include research to identify biological markers (e.g., genetic, proteomic, imaging) in model systems and humans that could be further validated as methods for diagnosing and detecting risk, onset, progress, and severity of mental disorders. High priority projects also include those that identify in diverse populations (from the U.S. and around the world) genetic variants, epigenetic mechanisms, and gene-environment interactions that influence vulnerability to mental disorders and treatment response. In addition, NIMH will continue to support studies to identify and validate new molecular targets and tools for drug discovery relevant to the treatment of mental disorders.

Services and Intervention Research: The program supports research to evaluate the effectiveness of pharmacologic, psychosocial, rehabilitative, and combination interventions on mental and behavior disorders. The program evaluates interventions for children, adolescents, and adults, focusing on acute and long-term therapeutic effects. Another important area supported by the program is mental health services research, including services organization and delivery; interventions to improve the quality and outcomes of care; and research on the dissemination and implementation of evidence-based interventions into service settings. In FY 2010, the program launched a major initiative, the Mental Health Research Network (MHRN), which will connect nine established public domain research centers that are based in integrated not-for-profit health care systems. These systems provide care to a diverse population of 10 million people in 11 states, and they share rich and compatible data resources to support a wide range of effectiveness research. Researchers have begun to use this network to address several important issues, including the development of a geographically and ethnically diverse autism spectrum disorder research registry; a pilot study for a new type of therapy for postpartum depression; and, a longitudinal analysis of how suicide warning labels on antidepressants affect later suicidality among youth.

Budget Policy: The FY 2012 budget estimate for this program is \$174.064 million, an increase of \$3.751 million or +2.2 percent over FY 2010. High priority will be given to studies that develop innovative interventions, including treatment regimens, prevention strategies, and innovative service delivery approaches to reduce the prevalence and burden of mental disorders. Program plans further emphasize research that will personalize interventions for optimal use among diverse populations, including underserved groups, those with comorbid conditions, across geographic locations, and across age groups. In FY 2012, the program will also emphasize research that will reduce the burden and mortality associated with suicide. This area of emphasis includes studies on early detection, assessment, interventions, and services for individuals at risk for suicide, across populations and ages.

Intramural Research Programs (IRP): The IRP is the research component of NIMH conducted directly by NIMH researchers, rather than through grants to the research community. Its mission is to plan and conduct basic, clinical, and translational research to advance understanding of the diagnosis, causes, treatment, and prevention of mental disorders. IRP scientists study brain function and behavior; conduct state-of-the-art research that complements extramural research activities; and provide an environment conducive to the training of clinical and basic scientists. In FY 2010, IRP researchers made many exciting discoveries. In one key clinical study, NIMH researchers found that ketamine, an anesthetic medication, provides rapid and effective treatment for depressive symptoms among bipolar disorder patients. While ketamine's side effects make it impractical for long term use, research will continue on developing this class of drugs as a rapid treatment for severe depressive symptoms. Severe depressive disorders, including bipolar disorder, are profoundly debilitating and are associated with an increased risk of suicide. The rapid and effective treatment of depression is an urgent public health need, since typical antidepressants often take weeks to be effective, and among a subset of people may not be effective at all.

Budget Policy: The FY 2012 budget estimate for these programs is \$171.594 million, a decrease of \$3.301 million or -1.9 percent under FY 2010. Scientists in the IRP will continue with ongoing research efforts that address several of the objectives of the NIMH Strategic Plan, which range from studies of normal brain function (conducted at the behavioral, systems, cellular, and molecular levels) to clinical investigations into the diagnosis, treatment, and prevention of mental illness. The IRP will continue to encourage and support cross-disciplinary collaborative efforts in these areas. The IRP will also continue to implement the recommendations of the NIMH 2008 Blue Ribbon Panel on Intramural Research, which included recommendations for strategic recruitments in emerging areas of mental health research.

Research Management and Support (RMS): This 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. In FY 2010, the Institute oversaw 2,765 research grants, 433 training grants and 140 research and development contracts. Moreover, 2010 NIMH proactively conducted several internal risk management reviews to examine and assess the effectiveness of management controls in eleven major areas of

responsibility. The focus of these reviews was to identify any weaknesses and detect any fraud, waste, or abuse. A few minor deficiencies were discovered during the reviews and corrective action plans are being implemented to modify internal policies and procedures to avoid reoccurrences of these deficiencies and prevent other deficiencies.

Budget Policy: The FY 2012 budget estimate for RMS is \$75.932 million, an increase of \$3.135 million or +4.3 percent over FY 2010. RMS costs shall continue to be closely monitored since staff salaries and expenses account for almost half of all RMS costs. Efforts are currently underway to analyze workforce efficiency and productivity to insure that new staff and support contractors are aligned to areas of increased program needs. Controls are in place on travel and equipment purchases and on conference support.

Common Fund

NIMH and NHGRI are the lead institutes for the Molecular Libraries Roadmap Initiative supported through the NIH Common Fund. This initiative offers public-sector researchers access to high throughput screening (HTS) of libraries of small organic compounds that can be used as chemical probes to study the functions of genes, cells, and biological pathways. This powerful HTS technology provides novel approaches to explore the functions of major cellular components in health and disease.

NATIONAL INSTITUTES OF HEALTH
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Budget Authority by Object
(Dollars in Thousands)

	FY 2010 Actual	FY 2012 PB	Increase or Decrease	Percent Change
Total compensable workyears:				
Full-time employment	620	623	3	0.5%
Full-time equivalent of overtime and holiday hours	1	1	0	0.0%
Average ES salary	\$166,945	\$167,955	\$1,010	0.6%
Average GM/GS grade	12.2	12.2	0.0	0.0%
Average GM/GS salary	\$98,362	\$98,957	\$595	0.6%
Average salary, grade established by act of July 1, 1944 (42 U.S.C. 207)	\$116,632	\$120,131	\$3,499	3.0%
Average salary of ungraded positions	138,611	138,611	0	0.0%
OBJECT CLASSES	FY 2010 Actual	FY 2012 Estimate	Increase or Decrease	Percent Change
Personnel Compensation:				
11.1 Full-time permanent	\$41,442	\$41,915	\$473	1.1%
11.3 Other than full-time permanent	25,827	25,825	(2)	0.0%
11.5 Other personnel compensation	1,683	1,697	14	0.8%
11.7 Military personnel	357	370	13	3.6%
11.8 Special personnel services payments	12,081	12,045	(36)	-0.3%
Total, Personnel Compensation	\$81,390	\$81,852	\$462	0.6%
12.0 Personnel benefits	\$19,270	\$19,392	\$122	0.6%
12.2 Military personnel benefits	200	200	0	0.0%
13.0 Benefits for former personnel	0	0	0	0.0%
Subtotal, Pay Costs	\$100,860	\$101,444	\$584	0.6%
21.0 Travel and transportation of persons	\$3,137	\$3,099	(\$38)	-1.2%
22.0 Transportation of things	286	284	(2)	-0.7%
23.1 Rental payments to GSA	0	0	0	0.0%
23.2 Rental payments to others	2	2	0	0.0%
23.3 Communications, utilities and miscellaneous charges	1,302	1,295	(7)	-0.5%
24.0 Printing and reproduction	368	406	38	10.3%
25.1 Consulting services	2,904	3,189	285	9.8%
25.2 Other services	25,802	25,723	(79)	-0.3%
25.3 Purchase of goods and services from government accounts	142,631	155,913	13,282	9.3%
25.4 Operation and maintenance of facilities	1,675	1,592	(83)	-5.0%
25.5 Research and development contracts	27,144	24,531	(2,613)	-9.6%
25.6 Medical care	589	555	(34)	-5.8%
25.7 Operation and maintenance of equipment	1,650	1,625	(25)	-1.5%
25.8 Subsistence and support of persons	0	0	0	0.0%
25.0 Subtotal, Other Contractual Services	\$202,395	\$213,128	\$10,733	5.3%
26.0 Supplies and materials	\$7,229	\$6,846	(\$383)	-5.3%
31.0 Equipment	4,490	4,307	(183)	-4.1%
32.0 Land and structures	0	0	0	0.0%
33.0 Investments and loans	0	0	0	0.0%
41.0 Grants, subsidies and contributions	1,169,471	1,186,195	16,724	1.4%
42.0 Insurance claims and indemnities	0	0	0	0.0%
43.0 Interest and dividends	0	0	0	0.0%
44.0 Refunds	0	0	0	0.0%
Subtotal, Non-Pay Costs	\$1,388,680	\$1,415,562	\$26,882	1.9%
Total Budget Authority by Object	\$1,489,540	\$1,517,006	\$27,466	1.8%

Includes FTEs which are reimbursed from the NIH Common Fund for Medical Research

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Salaries and Expenses
(Dollars in Thousands)

OBJECT CLASSES	FY 2010 Actual	FY 2012 PB	Increase or Decrease	Percent Change
Personnel Compensation:				
Full-time permanent (11.1)	\$41,442	\$41,915	\$473	1.1%
Other than full-time permanent (11.3)	25,827	25,825	(2)	0.0%
Other personnel compensation (11.5)	1,683	1,697	14	0.8%
Military personnel (11.7)	357	370	13	3.6%
Special personnel services payments (11.8)	12,081	12,045	(36)	-0.3%
Total Personnel Compensation (11.9)	\$81,390	\$81,852	\$462	0.6%
Civilian personnel benefits (12.1)	\$19,270	\$19,392	\$122	0.6%
Military personnel benefits (12.2)	200	200	0	0.0%
Benefits to former personnel (13.0)	0	0	0	0.0%
Subtotal, Pay Costs	\$100,860	\$101,444	\$584	0.6%
Travel (21.0)	\$3,137	\$3,099	(\$38)	-1.2%
Transportation of things (22.0)	286	284	(2)	-0.7%
Rental payments to others (23.2)	2	2	0	0.0%
Communications, utilities and miscellaneous charges (23.3)	1,302	1,295	(7)	-0.5%
Printing and reproduction (24.0)	368	406	38	10.3%
Other Contractual Services:				
Advisory and assistance services (25.1)	2,904	3,189	285	9.8%
Other services (25.2)	25,802	25,723	(79)	-0.3%
Purchases from government accounts (25.3)	98,745	98,719	(26)	0.0%
Operation and maintenance of facilities (25.4)	1,675	1,592	(83)	-5.0%
Operation and maintenance of equipment (25.7)	1,650	1,625	(25)	-1.5%
Subsistence and support of persons (25.8)	0	0	0	0.0%
Subtotal Other Contractual Services	\$130,776	\$130,848	\$72	0.1%
Supplies and materials (26.0)	\$7,171	\$6,792	(\$379)	-5.3%
Subtotal, Non-Pay Costs	\$143,042	\$142,726	(\$316)	-0.2%
Total, Administrative Costs	\$243,902	\$244,170	\$268	0.1%

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

OFFICE/DIVISION	FY 2010 Actual			FY 2011 CR			FY 2012 PB		
	Civilian	Military	Total	Civilian	Military	Total	Civilian	Military	Total
Office of the Director	111		111	113		113	113		113
Division of Neuroscience and Basic Behavioral Science	26		26	26		26	26		26
Division of AIDS Research	15		15	15		15	15		15
Division of Services and Intervention Research	21		21	21		21	21		21
Division of Adult Translational Research and Treatment Development	14	1	15	16	1	17	16	1	17
Division of Developmental Translational Research	14		14	14		14	14		14
Division of Extramural Activities	48		48	49		49	49		49
Division of Intramural Research Programs	368	2	370	366	2	368	366	2	368
Total	617	3	620	620	3	623	620	3	623
Includes FTEs which are reimbursed from the NIH Common Fund for Medical Research									
FTEs supported by funds from Cooperative Research and Development Agreements									
	0	0							0
FISCAL YEAR	Average GS Grade								
2008	11.9								
2009	12.1								
2010	12.2								
2011	12.2								
2012	12.2								

**NATIONAL INSTITUTES OF HEALTH
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Detail of Positions

GRADE	FY 2010 Actual	FY 2011 CR	FY 2012 PB
Total, ES Positions	2	2	2
Total, ES Salary	333,890	333,890	333,890
GM/GS-15	54	55	55
GM/GS-14	78	79	78
GM/GS-13	94	94	94
GS-12	87	87	87
GS-11	60	60	60
GS-10	1	1	1
GS-9	42	43	43
GS-8	17	17	17
GS-7	8	8	8
GS-6	2	2	2
GS-5	1	1	1
GS-4	1	1	1
GS-3	0	0	0
GS-2	0	0	0
GS-1	0	0	0
Subtotal	445	448	447
Grades established by Act of July 1, 1944 (42 U.S.C. 207):			
Assistant Surgeon General	0	0	0
Director Grade	3	3	3
Senior Grade	0	0	0
Full Grade	0	0	0
Senior Assistant Grade	0	0	0
Assistant Grade	0	0	0
Subtotal	3	3	3
Ungraded	202	202	202
Total permanent positions	442	445	445
Total positions, end of year	652	655	655
Total full-time equivalent (FTE) employment, end of year	620	623	623
Average ES salary	166,945	167,955	167,955
Average GM/GS grade	12.2	12.2	12.2
Average GM/GS salary	98,362	98,957	98,957

**NATIONAL INSTITUTES OF HEALTH
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New Positions Requested

	FY 2012		
	Grade	Number	Annual Salary
Health Science Administrator	GS-15	1	\$140,259
Health Science Administrator	GS-14	1	119,238
Grants Management Specialist	GS-9	1	58,511
Total Requested		3	\$318,008