

DEPARTMENT OF HEALTH AND HUMAN SERVICES

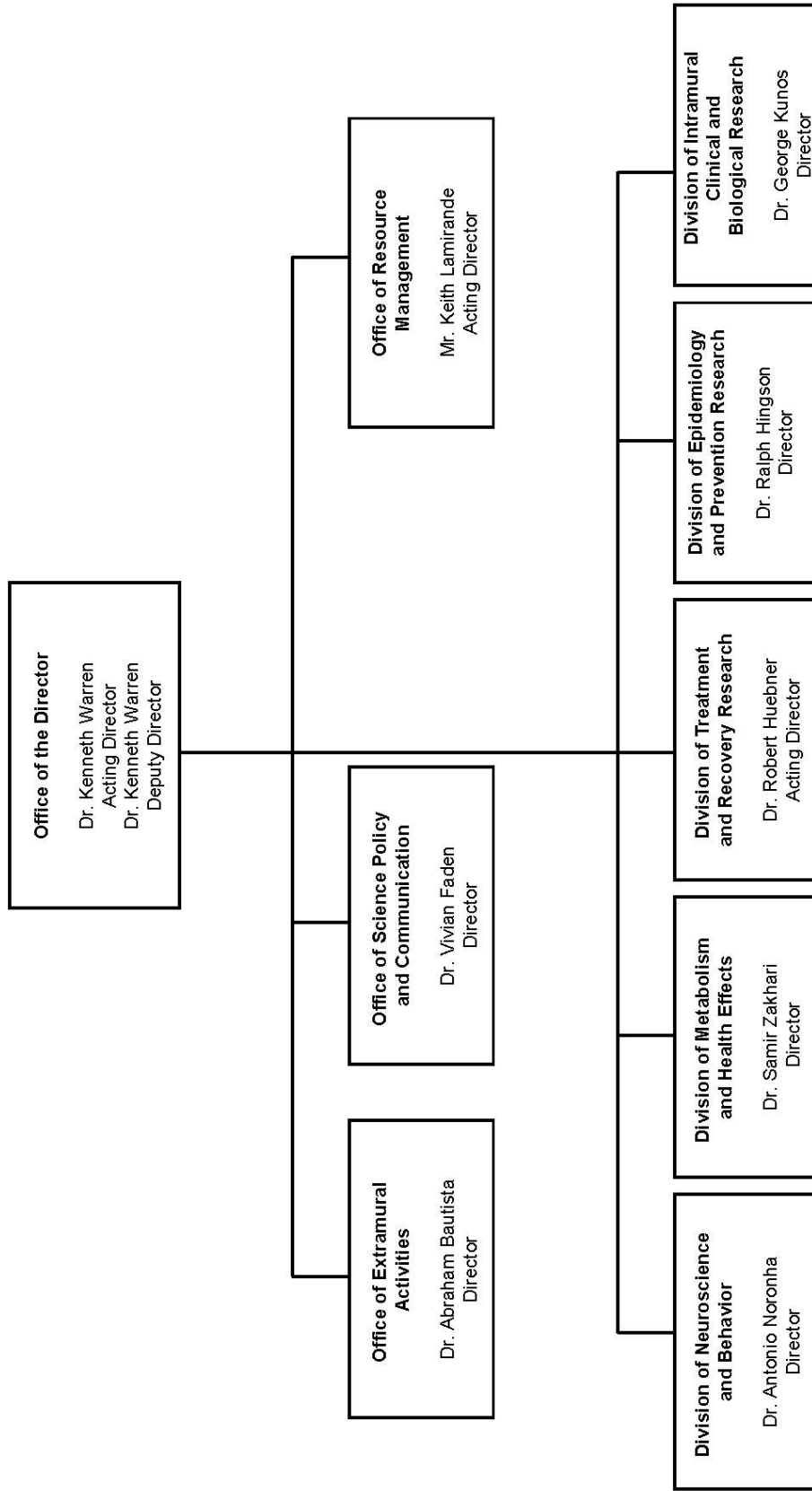
NATIONAL INSTITUTES OF HEALTH

National Institute on Alcohol Abuse and Alcoholism (NIAAA)

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NATIONAL INSTITUTES OF HEALTH

National Institute on Alcohol Abuse and Alcoholism



NATIONAL INSTITUTES OF HEALTH

National Institute on Alcohol Abuse and Alcoholism

For carrying out section 301 and title IV of the Public Health Services Act with respect to alcohol abuse and alcoholism, [\$460,389,000] \$457,104,000. (*Department of Health and Human Services Appropriations Act, 2012.*)

NATIONAL INSTITUTES OF HEALTH
National Institute on Alcohol Abuse and Alcoholism

Amounts Available for Obligation ¹
(Dollars in Thousands)

Source of Funding	FY 2011 Actual	FY 2012 Enacted	FY 2013 PB
Appropriation	462,346	460,389	457,104
Type 1 Diabetes	0	0	0
Rescission	(4,060)	(870)	0
Supplemental	0	0	0
Subtotal, adjusted appropriation	458,286	459,519	457,104
Real transfer under Secretary's transfer authority	0	(131)	0
Comparative Transfers for NCATS reorganization	0	0	0
Comparative Transfers to NCATS for Therapeutics and Rare and Neglected Diseases (TRND)	(377)	0	0
Comparative Transfers to NLM for NCBI and Public Access	(393)	(416)	0
Subtotal, adjusted budget authority	457,516	458,972	457,104
Unobligated balance, start of year	0	0	0
Unobligated balance, end of year	0	0	0
Subtotal, adjusted budget authority	457,516	458,972	457,104
Unobligated balance lapsing	(29)	0	0
Total obligations	457,487	458,972	457,104

¹ Excludes the following amounts for reimbursable activities carried out by this account:
FY 2011 - \$4,065 FY 2012 - \$4,101 FY 2013 - \$4,502

NATIONAL INSTITUTES OF HEALTH
National Institute on Alcohol Abuse and Alcoholism
Budget Mechanism - Total ^{1/}
(Dollars in Thousands)

MECHANISM	FY 2011 Actual		FY 2012 Enacted		FY 2013 PB		Change vs. FY 2012	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Research Grants								
<u>Research Projects</u>								
Noncompeting	535	\$207,425	478	\$194,152	471	\$188,347	(7)	(\$5,805)
Administrative Supplements	43	2,111	49	3,417	49	3,105	0	(312)
Competing:								
Renewal	37	17,733	38	18,263	38	18,080	0	(183)
New	113	35,419	118	37,156	118	36,784	0	(372)
Supplements	0	0	0	0	0	0	0	0
Subtotal, Competing	150	\$53,152	156	\$55,419	156	\$54,864	0	(\$555)
Subtotal, RPGs	685	\$262,688	634	\$252,988	627	\$246,316	(7)	(\$6,672)
SBIR/STTR	22	\$8,449	25	\$9,656	26	\$9,961	1	\$305
Research Project Grants	707	\$271,137	659	\$262,644	653	\$256,277	(6)	(\$6,367)
<u>Research Centers</u>								
Specialized/Comprehensive	21	\$27,675	21	\$27,675	21	\$27,537	0	(\$138)
Clinical Research	0	0	0	0	0	0	0	0
Biotechnology	0	0	0	0	0	0	0	0
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	21	\$27,675	21	\$27,675	21	\$27,537	0	(\$138)
<u>Other Research</u>								
Research Careers	94	\$14,634	94	\$14,634	94	\$14,561	0	(\$73)
Cancer Education	0	0	0	0	0	0	0	0
Cooperative Clinical Research	1	6,578	1	6,699	1	6,665	0	(34)
Biomedical Research Support	0	0	0	0	0	0	0	0
Minority Biomedical Research Support	0	0	0	0	0	0	0	0
Other	29	9,520	37	16,074	37	15,994	0	(80)
Other Research	124	\$30,732	132	\$37,407	132	\$37,220	0	(\$187)
Total Research Grants	852	\$329,544	812	\$327,726	806	\$321,034	(6)	(\$6,692)
<u>Research Training</u>								
Individual Awards	110	\$3,988	110	\$4,020	108	\$4,020	(2)	\$0
Institutional Awards	190	7,951	190	8,027	187	8,027	(3)	0
Total Research Training	300	\$11,939	300	\$12,047	295	\$12,047	(5)	\$0
Research & Development Contracts	69	\$37,993	70	\$41,159	70	\$45,983	0	\$4,824
<i>SBIR/STTR</i>	5	\$2,169	5	\$1,615	5	\$1,600	0	\$15
Intramural Research	<u>FTEs</u> 108	\$48,760	<u>FTEs</u> 108	\$48,760	<u>FTEs</u> 107	\$48,760	<u>FTEs</u> (1)	\$0
Research Management and Support	117	29,280	117	29,280	116	29,280	(1)	0
Construction	0	0	0	0	0	0	0	0
Buildings and Facilities	0	0	0	0	0	0	0	0
Total, NIAAA	225	\$457,516	225	\$458,972	223	\$457,104	(2)	(\$1,868)

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

Major Changes in the Fiscal Year 2013 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 mechanism and activity detail and these highlights will not sum to the total change for the FY 2013 President's Budget request for NIAAA, which is \$1.868 million less than the FY 2012 Enacted level, for a total of \$457.104 million.

Research Project Grants (-\$6.367 million; total \$256.277 million): NIAAA will support a total of 653 Research Project Grant (RPG) awards in FY 2013. Noncompeting RPGs will decrease by seven awards and \$5.805 million and competing awards will have no change in the number of awards and a reduction of \$0.555 million. NIH budget policy for RPGs in FY 2013 discontinues inflationary allowances and reduces the average cost of noncompeting and competing RPGs by one percent below the FY 2012 level.

Research Centers and Other Research Grants (-\$0.325 million; total \$64.757 million): NIAAA will support a total of 21 Research Centers and 132 Other Research Grants, the same as in FY 2012.

Research Training (+\$0.0 million; total \$12.047 million): The success of biomedical research is dependent upon the robustness of NIH training programs for the next generation of scientists. NIH will provide an across-the-board increase in FY 2013 of 2.0 percent for stipends levels under the Ruth L. Kirschstein National Research Service Award training program to continue efforts to attain the stipend levels recommended by the National Academy of Sciences. This will build on the 2.0 percent increase in stipend levels for FY 2012. The requested increase will help to sustain the development of a highly qualified biomedical research workforce.

Research and Development Contracts (+\$4.824 million; total \$45.983 million): Funds are included in R&D contracts to support trans-NIH initiatives, such as the Basic Behavioral and Social Sciences Opportunity Network (OppNet). Additional funds are also included for the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) contract.

Intramural Research and Research Management and Support (+\$0.0 million; total \$78.040 million): Intramural Research and Research Management and Support will be funded at the same level as in FY 2012. This funding level will maintain continued support for NIAAA laboratories within the Division of Intramural Clinical and Biological Research as well as the Intramural Office of Laboratory Animal Science. For Research Management and Support, funds will provide for the effective administration, planning and evaluation, public information and communications, and scientific leadership of the institute.

NATIONAL INSTITUTES OF HEALTH
National Institute on Alcohol Abuse and Alcoholism
Summary of Changes
(Dollars in Thousands)

FY 2012 Enacted				\$458,972
FY 2013 President's Budget				\$457,104
Net change				(\$1,868)
CHANGES	2013 President's Budget		Change from FY 2012	
	FTEs	Budget Authority	FTEs	Budget Authority
A. Built-in:				
1. Intramural Research:				
a. Annualization of January 2012 pay increase & benefits		\$18,777		\$2
b. January FY 2013 pay increase & benefits		18,777		61
c. One more day of pay		18,777		72
d. Annualization of PY net hires		18,777		0
e. Payment for centrally furnished services		7,765		0
f. Increased cost of laboratory supplies, materials, other expenses, and non-recurring costs		22,218		0
Subtotal				\$135
2. Research Management and Support:				
a. Annualization of January 2012 pay increase & benefits		\$17,997		\$0
b. January FY 2013 pay increase & benefits		17,997		54
c. One more day of pay		17,997		69
d. Annualization of PY net hires		17,997		0
e. Payment for centrally furnished services		687		0
f. Increased cost of laboratory supplies, materials, other expenses, and non-recurring costs		10,596		0
Subtotal				\$124
Subtotal, Built-in				\$259

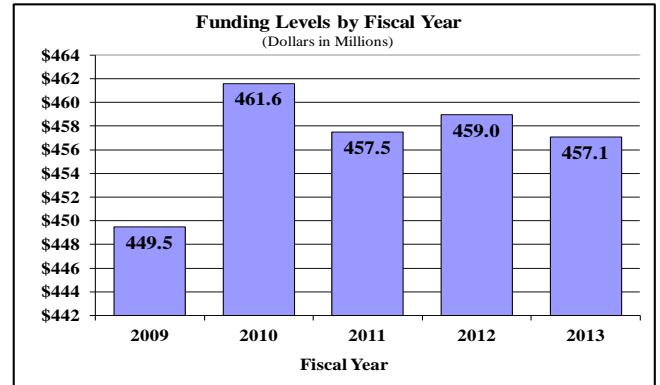
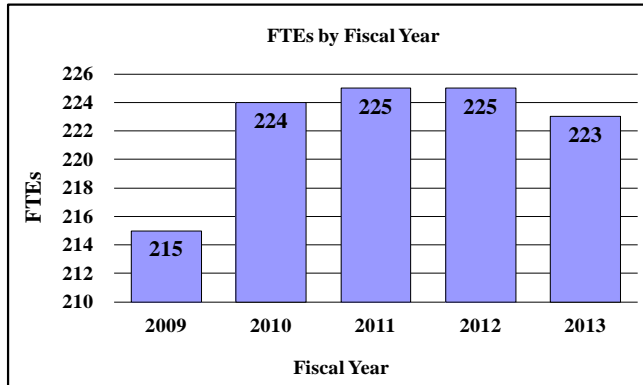
NATIONAL INSTITUTES OF HEALTH
National Institute on Alcohol Abuse and Alcoholism

Summary of Changes--continued

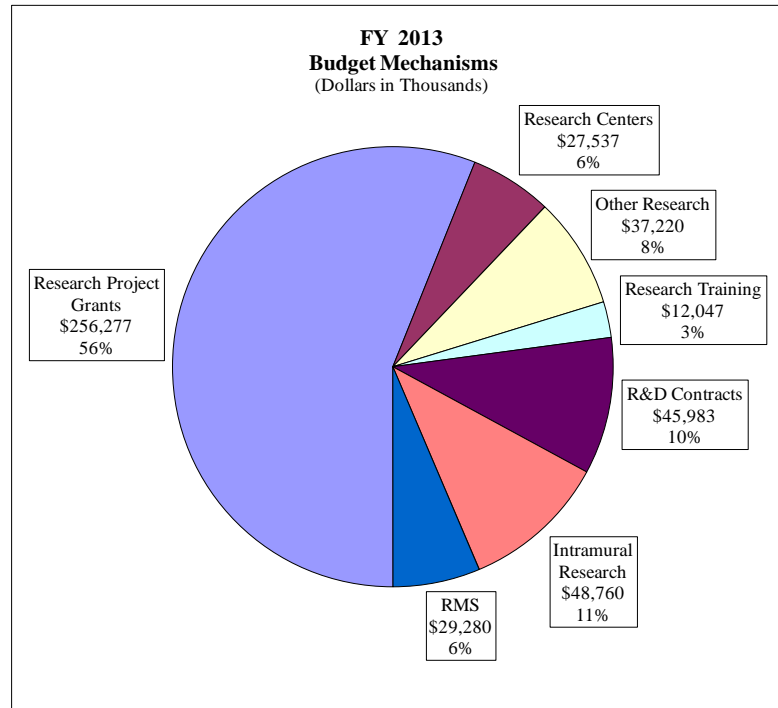
CHANGES	2013 President's Budget		Change from FY 2012	
	No.	Amount	No.	Amount
B. Program:				
1. Research Project Grants:				
a. Noncompeting	471	\$191,452	(7)	(\$6,117)
b. Competing	156	54,864	0	(555)
c. SBIR/STTR	26	9,961	1	305
Total	653	\$256,277	(6)	(\$6,367)
2. Research Centers	21	\$27,537	0	(\$138)
3. Other Research	132	37,220	0	(187)
4. Research Training	295	12,047	(5)	0
5. Research and development contracts	70	45,983	0	4,824
Subtotal, Extramural		\$379,064		(\$1,868)
	<u>FTEs</u>		<u>FTEs</u>	
6. Intramural Research	107	\$48,760	(1)	(\$135)
7. Research Management and Support	116	29,280	(1)	(124)
8. Construction		0		0
9. Buildings and Facilities		0		0
Subtotal, program	223	\$457,104	(2)	(\$2,127)
Total changes				(\$1,868)

Budget Graphs

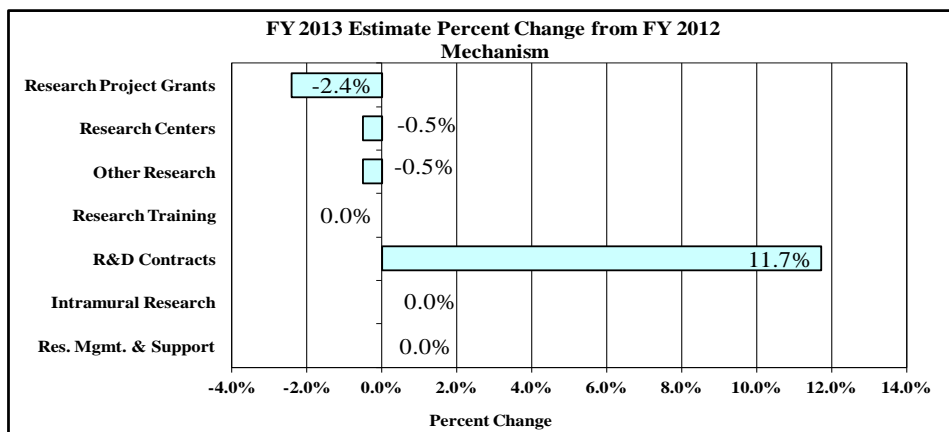
History of Budget Authority and FTEs



Distribution by Mechanism



Change by Selected Mechanism:



NATIONAL INSTITUTES OF HEALTH
National Institute on Alcohol Abuse and Alcoholism
Budget Authority by Activity
(Dollars in Thousands)

	FY 2011 Actual		FY 2012 Enacted		FY 2013 PB		Change vs. FY 2012 Enacted	
	FTEs	Amount	FTEs	Amount	FTEs	Amount	FTEs	Amount
Extramural Research								
Detail:								
Embryo and Fetus		\$19,088		\$19,161		\$19,068		(93)
Youth/Adolescence		\$57,111		\$57,330		\$57,049		(281)
Young Adult		171,903		172,563		171,716		(847)
Mid-Life/Senior Adult		131,374		131,878		131,231		(647)
Subtotal, Extramural		\$379,476		\$380,932		\$379,064		(\$1,868)
Intramural Research	108	\$48,760	108	\$48,760	107	\$48,760	(1)	\$0
Research Management & Support	117	\$29,280	117	\$29,280	116	\$29,280	(1)	\$0
TOTAL	225	\$457,516	225	\$458,972	223	\$457,104	(2)	(\$1,868)

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

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

**NATIONAL INSTITUTES OF HEALTH
National Institute on Alcohol Abuse and Alcoholism**

Authorizing Legislation

	PHS Act/ Other Citation	U.S. Code Citation	2012 Amount Authorized	FY 2012 Enacted	2013 Amount Authorized	FY 2013 PB
Research and Investigation	Section 301	42§241	Indefinite	\$458,972,000	Indefinite	\$457,104,000
National Institute on Alcohol Abuse and Alcoholism	Section 401(a)	42§281	Indefinite		Indefinite	
Total, Budget Authority				\$458,972,000		\$457,104,000

NATIONAL INSTITUTES OF HEALTH
National Institute on Alcohol Abuse and Alcoholism

Appropriations History

Fiscal Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
2004	\$430,121,000	\$430,121,000	\$431,521,000	\$431,471,000
Rescission				(\$2,802,000)
2005	\$441,911,000	\$441,911,000	\$444,900,000	\$441,911,000
Rescission				(\$3,634,000)
2006	\$440,333,000	\$440,333,000	\$452,271,000	\$440,333,000
Rescission				(\$4,403,000)
2007	\$433,318,000	\$433,318,000	\$433,318,000	\$435,930,000
Rescission				\$0
2008	\$436,505,000	\$436,505,000	\$436,505,000	\$436,256,000
Rescission				(\$7,757,000)
Supplemental				\$2,320,000
2009	\$436,681,000	\$451,688,000	\$448,834,000	\$450,230,000
Rescission				\$0
2010	\$455,149,000	\$466,308,000	\$457,887,000	\$462,346,000
Rescission				\$0
2011	\$474,649,000		\$473,904,000	\$462,346,000
Rescission				(\$4,059,673)
2012	\$469,197,000	\$469,197,000	\$453,127,000	\$460,389,000
Rescission				(\$870,135)
2013	\$457,104,000			

Justification of Budget Request

National Institute on Alcohol Abuse and Alcoholism

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

Budget Authority:

	FY 2011 Actual	FY 2012 Enacted	FY 2013 President's Budget	FY 2013 +/- FY 2012
BA	\$457,516,000	\$458,972,000	\$457,104,000	-\$1,868,000
FTE	225	225	223	-2

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

Director's Overview

The National Institute on Alcohol Abuse and Alcoholism (NIAAA) is the lead U.S. agency for research on alcohol abuse, alcoholism, and other health and developmental effects of alcohol use across the lifespan. Its mission is to support research, and then translate and disseminate research findings to reduce alcohol-related problems in the U.S. and globally.

Research Defines the Scope of Alcohol's Health Effects

- Alcohol is a major cause of preventable death in the U.S.¹
- Approximately 18 million people in the U.S. suffer from alcohol abuse or dependence.²
- The estimated cost of excessive alcohol consumption in the U.S. for 2006 is \$223.5 billion.³
- Excessive and/or chronic alcohol use can result in medical conditions such as liver and heart disease, pancreatitis, brain damage, and esophageal and liver cancer.
- Forty percent of those with alcoholic hepatitis, one of the most serious forms of alcohol-induced liver disease, die within six months of the onset of the clinical syndrome.
- Alcohol is the substance of choice among adolescents; early alcohol use is associated with future alcohol dependence as well as a range of other consequences, and may interfere with brain development (see portrait).⁴
- According to the CDC, in 2006, the cost of underage drinking in the U.S. was \$27 billion.⁵
- Drinking during pregnancy can damage the developing embryo and fetus resulting in congenital organ defects and physical disabilities, as well as lifelong problems with cognition, behavioral control, and socialization.

¹ Mokdad AH, et al. JAMA. 2004. 29: 1238-45; CDC - Alcohol-Attributable Deaths Report, Average for United States 2001-2005.

² Substance Abuse and Mental Health Services Administration. (2010). *Results from the 2009 National Survey on Drug Use and Health: Vol I. Summary of National Findings* (Office of Applied Studies, NSDUH Series H-38A, HHS Pub No. SMA 10-4586Findings). Rockville, MD.

³ Bouchery, EE, et al. 2011. 41(5): 516-524. American Journal of Preventive Medicine. Economic Costs of Excessive Alcohol Consumption in the U.S., 2006. <http://www.ajpmonline.org/>

⁴ Op.cit. Substance Abuse and Mental Health Services Administration.

⁵ Op. cit. Bouchery, EE, et al.

Extraordinary Scientific Opportunities to Improve Health Across the Lifespan

Advances in genome technology, pharmacogenetics, and imaging, among others, are being put to work to help the millions of people who suffer from the negative effects of alcohol misuse. Given the significant loss in workforce productivity, the billions of dollars spent by the federal, state, and local governments, and the financial and emotional toll on families and individuals, such scientific advances have the potential for significant economic and personal impact.

Alcohol, a chemically simple substance, can affect virtually every organ in the body. In the brain, alcohol interacts with multiple receptors and other signaling molecules, resulting in sensations from stimulation to sedation. Surprisingly, different individuals respond differently to alcohol, and how one responds reveals something about one's underlying risk for alcohol dependence. For example, some individuals experience a sense of euphoria when they drink whereas others have a muted response to alcohol. Both are at increased risk for excessive consumption and alcohol dependence; however, in clinical studies only the former group benefited from the drug naltrexone (which dampens feelings of alcohol induced euphoria) by reducing their alcohol consumption.

NIAAA is pursuing several key lines of research to better understand who drinks and why, and what works for those with alcohol problems. Through its large national surveys conducted over the last several decades, NIAAA has amassed a rich collection of data on the prevalence of alcohol and other substance use disorders, and their association with other mental disorders. In FY 2012-13, NIAAA will be fielding the next National Epidemiologic Survey on Alcohol and Related Conditions (NESARC), which for the first time will collect DNA from survey participants (see portrait). Capitalizing on recent advances in genomic technology, researchers will be able to combine whole genome analyses with detailed survey information to uncover associations between substance use disorders, other psychiatric disorders, and areas of the genome. These studies should also help explain why individuals experience alcohol's effects differently and how that relates to risk for alcohol problems and medication efficacy.

At the same time, efforts under NIAAA's Clinical Investigators Group (NCIG) are efficiently moving promising compounds through Phase II clinical testing, to determine which ones are worth pursuing. The recognition that certain patients respond better to a given compound based upon their genetic profiles will continue to inform medications development. NCIG recently added DNA collection to its clinical protocols facilitating pharmacogenetic analyses. Studies have shown associations between a medication's effectiveness for treatment of alcohol dependence and distinct genetic variants for four different medications directed at four distinct molecular targets. For example, two polymorphisms within different areas of the regulatory domain of the serotonin transporter (5-HTT) gene were each shown to alter an individual's response to ondansetron, an anti-nausea drug that is being studied for treating alcohol dependence; and interaction between these two sites significantly increased the effect size of ondansetron. Such studies confirm the need for new medications directed at diverse molecular targets and for clinical trials to identify those individuals for whom they work best. **Basic neuroscience research** assessing alcohol's effects on pathways and processes in the brain will exploit **cutting edge imaging technology** to uncover additional targets.

Chronic heavy alcohol use can also damage the liver. Alcoholic hepatitis, one of the most serious forms of alcohol-induced liver disease, is a syndrome of progressive inflammation associated with long term heavy alcohol intake. NIAAA has a strong **basic research** focus in this area and also is launching a **translational program** to: test new drugs and combinations of existing medications; develop immunomodulatory and anti-chemokine therapy for alcoholic hepatitis; and evaluate drug delivery mechanisms to the liver. Complementing this approach, NIAAA's intramural scientists are successfully targeting endocannabinoid action in the liver to prevent the development of alcohol-induced fatty liver, a forerunner of more serious liver disease.

It is not sufficient to have effective treatments; we must work to identify individuals at the earliest possible stage of alcohol problems. NIAAA continues to promote alcohol screening, brief intervention and referral to treatment through use of its clinician's guides, *Helping Patients Who Drink Too Much*, for adults, and the newly released *Alcohol Screening and Brief Intervention for Youth*, for those ages 9 to 18 (see portrait).

Overall Budget Policy: Investigator-initiated research projects, new investigator research and research training remain the Institute's highest priorities. In FY 2013, NIAAA will support new investigators on R01 equivalent awards at success rates equivalent to those of established investigators submitting new R01 equivalent applications. Program plans in FY 2013 will focus on several key themes of the NIH including Investing in Basic Research, Accelerating Discovery Through Technology, Advancing Translational Sciences, and Encouraging New Investigators and New Ideas. Funds are included in R&D contracts to support trans-NIH initiatives, such as the Basic Behavioral and Social Sciences Opportunity Network (OppNet).

FY 2013 Justification by Program

Program Descriptions and Accomplishments

Embryo and Fetus: The developing embryo and fetus are exquisitely vulnerable to the adverse effects of alcohol. NIAAA's research support for this life stage encompasses outreach to pregnant women for identification and intervention of risky drinking; research to enhance our ability for early identification of and interventions with prenatal alcohol affected children; examination of nutritional and pharmacological agents such as choline that could lessen alcohol's adverse effects on the developing embryo/fetus or reverse those effects in affected children; and research on how alcohol disrupts normal embryonic and fetal development. Research has shown that the severity of alcohol-related effects on the developing fetus is affected by the timing and level of maternal alcohol consumption, maternal nutritional status and maternal hormones. One of the key challenges facing clinicians is the ability to recognize women who are drinking in pregnancy and the infant who has been exposed to alcohol prenatally. Recent advances in methodologies for the measurement of alcohol metabolites which unlike the alcohol molecule itself, persist in various tissues such as blood, urine and hair for days to weeks have provided new opportunities for monitoring and assessing alcohol exposure. In addition, ongoing studies are demonstrating the utility of technologies including fetal ultrasound and 3D facial image analysis for earlier and improved recognition of children affected by prenatal alcohol exposure. In collaboration with NICHD and NIDCD, NIAAA is supporting studies to investigate the association between prenatal alcohol exposure and the risk of Sudden Infant Death Syndrome

(SIDS) and stillbirth as well as the interactions between prenatal alcohol exposure and other environmental and maternal factors.

Budget Policy: The FY 2013 President's Budget request is \$19.068 million, a decrease of \$0.093 million or 0.5 percent, under the FY 2012 Enacted level.

Recognizing that accurate estimates of the incidence and prevalence of fetal alcohol spectrum disorders (FASD) in the U.S. are lacking, in FY 2013 NIAAA will support epidemiological assessments of FASD at several geographic sites across the U.S. to gain a better understanding of the full extent of the disorders caused by prenatal exposure to alcohol. In addition, NIAAA, in collaboration with NICHD and NIDCD, will support research to determine the association between prenatal alcohol exposure and the risk for SIDS and stillbirth, and interactions between prenatal alcohol exposure and other environmental and maternal factors. NIAAA will also fund human and animal studies to assess the efficacy of choline as an intervention for the prevention and/or treatment of FASD.

Youth/Adolescence (Ages 0-17): Adolescence is the time of life during which drinking, binge drinking (drinking five or more drinks on one occasion) and heavy drinking (binge drinking five or more times in the past 30 days) all ramp up dramatically. It is also a period of significant biological, social, and environmental changes. To address the pervasive use of alcohol among young people, NIAAA developed an empirically based alcohol screener and guide for pediatricians and other clinicians who care for children and adolescents. This recently released, developmentally appropriate screening instrument, endorsed by the American Academy of Pediatrics, was devised to identify children at elevated risk for using alcohol as well as those children and adolescents who have already begun to experiment, or are more heavily involved with alcohol. Protecting the developing body and brain from alcohol exposure is an important investment in short- and long-term health. NIAAA also has a significant research investment targeting this period of life focusing on: 1) the effects of alcohol use on the developing body and brain (see portrait), and 2) the interplay of development, genes, environment and adolescent alcohol use.

Budget Policy: The FY 2013 President's Budget request is \$57.049 million, a decrease of \$0.281 million or 0.5 percent, under the FY 2012 Enacted level.

In FY 2013, NIAAA will support studies to evaluate its recently released youth alcohol screening guide in clinical settings. The brief, two question screener will be assessed in youth ages 9 to 18 both: as a predictor of alcohol risk, alcohol use, and alcohol problems including alcohol use disorders; and as an initial screen for other behavioral health problems, for example other drug use, smoking, or conduct disorder. Building on recently completed pilot studies, in FY 2013 NIAAA will also support a multisite longitudinal study to address the following: 1) what are the effects of both long and shorter-term child and adolescent alcohol exposure on the developing human brain; 2) what is the effect of timing, dose, and duration of alcohol exposure on brain development; 3) to what extent do these effects resolve or persist; 4) how do key covariates factor into alcohol's effects on the brain; and 5) potentially identify early neural, cognitive, and affective markers that may predict alcohol abuse and dependence and onset or worsening of mental illness during adolescence and/or adulthood.

Young Adult (Ages 18-29): For young adults, whose drinking behavior and extent of associated problems vary widely, NIAAA focuses on risk assessment, universal and selective prevention, early intervention (before problems escalate and/or become chronic), and timely treatment for those who need it. Given the pervasiveness of high-risk drinking and alcohol dependence among young adults, efforts to alter drinking trajectories at this stage have life-changing potential and can significantly reduce the burden of illness resulting from alcohol-related problems. Incidents of alcohol poisonings and other alcohol related consequences on college campuses are commonplace. Especially worrisome is the percent of college students who report having experienced a blackout in the past year as a result of drinking. Blackouts are periods of memory loss for events that transpired while a person was drinking and fully conscious, and result from alcohol's disruption of activity in the brain's hippocampus. In one study at a major university, 40 percent of students surveyed who drank in the past year reported a blackout in that period, with an average of 3.2 blackouts per year each. For this study a blackout was defined as "waking in the morning after a night of drinking not able to remember places that you went or things that you did." NIAAA supported studies have shown that both individual and environmental approaches to prevention and treatment for college students are necessary to reduce harmful drinking and its consequences (see portrait). Strategies such as: providing alcohol screening in the college health center; ensuring colleges partner with surrounding communities on alcohol policies; holding Friday classes; encouraging parents to communicate regularly with their college students especially on weekends; and being mindful of especially vulnerable periods such as the first six weeks of freshman year, spring break, and study abroad can all influence students' drinking behavior.

Budget Policy: The FY 2013 President's Budget request is \$171.716 million, a decrease of \$0.847 million or 0.5 percent, under the FY 2012 Enacted level.

In FY 2013 NIAAA will be fielding its new National Epidemiologic Survey on Alcohol and Related Conditions (NESARC). The survey will collect data on the current prevalence of and trends in alcohol use and related conditions, along with DNA, from an estimated 46,500 participants. The new NESARC will be expanded to include questions on eating and personality disorders as well as risky behaviors, adding to the body of knowledge on their associations with alcohol-related problems. To address the important cultural differences that influence alcohol use and related disorders, NESARC will be translated into six different languages. NIAAA will also continue its support of research on college drinking.

Midlife/Senior Adult: Research has demonstrated that there is no typical alcoholic; the variation among individuals who meet criteria for alcohol dependence reflects both the subtype of dependence and individual genetic make-up. NIAAA's research focus for the midlife/senior population encompasses: 1) identification of mechanisms by which alcohol and its metabolites cause tissue and organ pathologies; 2) development of treatment strategies for alcohol dependence (including medications) that are tailored to specific populations; and 3) treatment of individuals with co-existing psychiatric and medical disorders. In its ongoing efforts to deal with one of the most serious medical consequences of alcohol dependence, NIAAA continues to support medications development for the treatment of alcoholic liver disease and continues to seek biomarkers for liver damage. In order to better understand how alcohol causes cell and

tissue damage in multiple organs in the body, NIAAA supports studies using a systems biology approach to investigate how pathological changes in one organ can also result in physiological aberrations in another. Such an approach is being used to study the interactions between the gut, liver and brain. To ensure efficient testing of promising compounds for alcohol dependence and to move them more quickly through early clinical testing, the Institute established the NIAAA Clinical Investigations Group (NCIG). By conducting early clinical trials itself, NIAAA anticipates that pharmaceutical companies will be more willing to pursue those compounds shown to be effective. In its medications development program, NIAAA has been especially successful at linking individual genetic variation with positive outcomes for specific medications.

Budget Policy: The FY 2013 President's Budget request is \$131.231 million, a decrease of \$0.647 million or 0.5 percent, under the FY 2012 Enacted level.

In FY 2013 NIAAA will continue to fund medications development through the NIAAA clinical investigations group (NCIG). Support will also be provided for pharmacogenetics studies that attempt to match patients with treatment based on genetic make-up. In FY 2013 NIAAA will also support translational research on alcoholic hepatitis which causes substantial early mortality (up to 40%) within 6 months after the onset of the clinical syndrome. In the long-term, patients who survive an episode of AH have a 70 percent probability of developing cirrhosis. The major goal of this research initiative is to expedite the translation of promising emerging findings as well as to find new molecules using combinatorial chemistry to advance the development of new treatments for AH.

Program Portrait: Underage drinking: Impact on brain development and behavior in adolescents and college students

FY 2012 Level: \$69.643 million

FY 2013 Level: \$69.295 million

Difference: -\$00.348 million

We now know that the brain continues to develop through late adolescence into early adulthood. Whereas a number of studies in both humans and animals have shown deficits associated with heavy adolescent alcohol use, most human studies to date have been cross-sectional in nature and involved heavy binge drinking adolescents with or without alcohol use disorders. It is not clear whether the structural and functional deficits observed in these individuals predated the onset of alcohol use or occurred as a consequence of it. To further elucidate how alcohol impacts the developing adolescent brain in both the short and long term, NIAAA recently released a Request for Applications to conduct multisite longitudinal studies of youth ages 12-21, capturing them before they begin to drink. The studies will use advanced neuroimaging technology as well as neuropsychological and behavioral measures to assess alcohol's effects on brain development and the associated cognitive, affective and behavioral processes. Beginning in late FY 2012 and extending over the next five years, this program will support the largest longitudinal study ever conducted on the vulnerability of the adolescent brain to alcohol exposure. In FY 2013 NIAAA will continue to support animal basic research on the effects of adolescent alcohol exposure on subsequent brain function and behavior into adulthood. For older adolescents, college often presents an opportunity to drink and binge drinking is often accepted as a cultural norm. Binge drinking threatens the overall well-being of students and puts them at increased risk for cognitive impairment, poor academic performance, social problems, assault, alcohol poisoning, injuries, death, and alcohol dependence. NIAAA research has yielded promising prevention strategies to curb harmful drinking and related consequences on college campuses. College presidents across the nation are now partnering with NIAAA to bring renewed national attention to college drinking. The NIAAA College Presidents Working Group encourages the translation of college prevention research findings into practice and provides a

platform for sharing and disseminating evidence-based information. Given that not all strategies are appropriate for all schools, NIAAA and the Working Group are collaborating with extramural scientists on a “matrix” of interventions organized by effectiveness, cost, and ease of implementation to guide college administrators in selecting and implementing interventions on their campuses.

Program Portrait: The National Epidemiologic Survey on Alcohol and Related Conditions (NESARC)

FY 2012 Level: \$12.334 million

FY 2013 Level: \$14.391 million

Difference: \$+2.057 million

The NESARC is the largest and most comprehensive national survey conducted on patterns of alcohol use, alcohol use disorders and co-occurring mental and physical disabilities. First conducted in 2001, with a follow-up in 2004, NESARC revealed significant findings about alcohol use in the U.S. general population that have profoundly impacted the alcohol field. For example, analyses of NESARC data showed that early alcohol use is not only associated with future alcohol dependence but dependence at an earlier age. Using NESARC data, researchers also showed that only one quarter of alcohol dependent individuals reported ever receiving formal or self-help treatment; those who entered treatment were four times more likely to stop drinking than those who continued to struggle on their own. Notably, NESARC data were used to develop and validate NIAAA’s guidelines for predicting risk for problem drinking and related consequences, which form the basis for NIAAA’s Clinician’s Guide. The NIAAA is now preparing to launch a new NESARC survey beginning in 2012 and continuing through 2013. The survey will not only collect data on the current prevalence of and trends in alcohol use and related conditions, but will also collect DNA from the estimated 46,500 participants. Using this large and diverse DNA collection, recent advances in genome-wide sequencing technologies will be used to examine an even wider array of alcohol-related genetic variations than was possible with previous genome association technologies. These data will be used to identify the environmental and genetic risk factors, and their interactions, which contribute to alcohol use patterns, alcohol use disorders and co-occurring conditions, making the new NESARC the largest alcohol-related study conducted to date to examine these contributions. The NESARC will be expanded to include questions on eating and personality disorders as well as risky behaviors, adding to the body of knowledge on their associations with alcohol-related problems. It will also be one of the first national surveys to use the recent DSM-V definitions and assess the impact of changes from DSM-IV definitions. To address the unique cultural differences that influence alcohol use and related disorders, NESARC will be translated into six different languages. With these added features, the upcoming NESARC will advance our understanding of alcohol use and co-occurring disorders and the related consequences, which will guide prevention and treatment efforts to reduce the health, social, and economic burdens that result.

Program Portrait: Preparing the medical workforce: Making alcohol screening and treatment commonplace

FY 2012 Level: \$6.100 million

FY 2013 Level: \$6.100 million

Difference: \$ 0 million

Alcohol screening and brief intervention is now recognized as a leading, cost-effective, preventive service in primary care. This development, in conjunction with the availability of standard guidelines and recently approved Medicare coverage, means that screening, brief intervention and referral to treatment (SBIRT) should soon be widely implemented in primary care. It also means that the healthcare system must be staffed with professionals who are skilled in handling patients who engage in harmful drinking. NIAAA is addressing the growing need for health professionals who are trained to identify and treat patients with problem drinking in primary care, specialty care and other clinical settings through the development of post-graduate education programs. For example, a recently funded educational program will bring together addiction medicine research, clinical practice and medical education to foster the next generation of addiction medicine practitioners. NIAAA is also sponsoring the development of a dental school curriculum to train students to conduct alcohol SBIRT as well as understand, recognize and address the particular dental needs of patients who drink heavily. Recognizing that integrating routine SBIRT poses challenges for many primary care practices, NIAAA will continue to support research on the implementation, effectiveness and cost-effectiveness of SBIRT in FY 2013, including the identification of key

implementation barriers and facilitators. Some primary care practices have already incorporated alcohol SBIRT into their electronic medical records, which not only has facilitated screening, but also enabled monitoring of the rates and outcomes of SBIRT. Screening for alcohol problems in pediatric care continues to be a priority, and in FY 2013 NIAAA will provide continuing medical education (CME), modeled after the successful *Clinician's Guide* CME, for its recently released youth alcohol screening guide. Multimedia products that encourage integration of the youth screening guidelines into medical school courses and routine pediatric practice will also be developed and distributed. Studies to evaluate the effectiveness of the screening guide as a predictor of alcohol risk/use/problems, including alcohol use disorders, and as an initial screen for other behavioral health problems are anticipated starting in late FY 2012. Healthcare provider training for a range of medical disciplines and integration of SBIRT into practice in diverse settings will increase the likelihood that all patients will be screened for alcohol problems and that those who need help will have access to trained personnel who can effectively provide interventions ranging from brief advice to behavioral therapy and pharmacotherapy.

Intramural Research: The Intramural Research Program has made significant advances in the areas of medications development, neuroscience, genetics, epidemiology and physiology. A major focus of NIAAA in general, and of the Intramural Program specifically, has been to improve treatment of alcohol use disorders and associated problems. The approach of identifying molecular targets for treatment in experimental animals and then validating these targets in clinical research studies has been successful. There has also been considerable progress in identifying genes that underlie alcohol dependence and that influence the efficacy of specific treatments, confirming that some treatments are more effective than others in individuals with particular gene variants. The Intramural Research Program also focuses on understanding and preventing alcoholic liver disease. Studies have revealed that endocannabinoids – endogenous marijuana-like substances – are necessary in a specific type of liver cell for the development of alcohol-induced fatty liver, a forerunner of more serious liver diseases, such as cirrhosis and liver cancer. A novel medication that targets endocannabinoid action in peripheral tissues, such as the liver, without causing adverse neuropsychiatric side effects is currently under development. Other studies have demonstrated that dietary supplements can prevent the development of alcohol-induced fatty liver and mitochondrial dysfunction in animal models. In addition, the Intramural Program continues to conduct large scale studies that provide information on the extent of alcohol and other drug dependence and co-occurring mental disorders in the U.S. population (see portrait). Treatment studies on alcohol dependence and co-occurring psychiatric disorders are also underway.

Budget Policy: The FY 2013 President's Budget request is \$48.760 million, the same as the FY 2012 Enacted level. The request maintains continued support for NIAAA laboratories within the Division of Intramural Clinical and Biological Research as well as the Intramural Office of Laboratory Animal Science.

Research Management and Support: NIAAA RMS activities provide administrative, budgetary, logistical, and scientific support in the review, award, and monitoring of research grants, training awards, and research and development contracts. RMS functions also encompass strategic planning, coordination, and evaluation of the Institute's programs, regulatory compliance, international coordination, and liaison with other Federal agencies, Congress, and the public.

Budget Policy: The FY 2013 President's Budget request is \$29.280 million, the same as the FY 2012 Enacted level.

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Budget Authority by Object
(Dollars in Thousands)

	FY 2012 Enacted	FY 2013 PB	Increase or Decrease
Total compensable workyears:			
Full-time employment	225	223	(2)
Full-time equivalent of overtime and holiday hours	1	1	0
Average ES salary (<i>in dollars</i>)	\$179,700	\$179,700	\$0
Average GM/GS grade	12.8	12.8	0.0
Average GM/GS salary (<i>in dollars</i>)	\$107,043	\$107,043	\$0
Average salary, grade established by act of July 1, 1944 (42 U.S.C. 207) (<i>in dollars</i>)	\$137,785	\$137,785	\$0
Average salary of ungraded positions (<i>in dollars</i>)	140,834	140,834	0
OBJECT CLASSES	FY 2012 Enacted	FY 2013 PB	Increase or Decrease
Personnel Compensation:			
11.1 Full-time permanent	\$18,174	\$18,089	(\$85)
11.3 Other than full-time permanent	6,498	6,505	7
11.5 Other personnel compensation	774	775	1
11.7 Military personnel	495	503	8
11.8 Special personnel services payments	3,307	3,310	3
Total, Personnel Compensation	\$29,248	\$29,182	(\$66)
12.0 Personnel benefits	\$7,199	\$7,183	(\$16)
12.2 Military personnel benefits	410	409	(1)
13.0 Benefits for former personnel	0	0	0
Subtotal, Pay Costs	\$36,857	\$36,774	(\$83)
21.0 Travel and transportation of persons	\$855	\$776	(\$79)
22.0 Transportation of things	54	54	0
23.1 Rental payments to GSA	0	0	0
23.2 Rental payments to others	13	13	0
23.3 Communications, utilities and miscellaneous charges	322	330	8
24.0 Printing and reproduction	144	144	0
25.1 Consulting services	342	342	0
25.2 Other services	4,638	4,678	40
25.3 Purchase of goods and services from government accounts	43,724	47,175	3,451
25.4 Operation and maintenance of facilities	171	171	0
25.5 Research and development contracts	24,087	25,509	1,422
25.6 Medical care	170	170	0
25.7 Operation and maintenance of equipment	898	898	0
25.8 Subsistence and support of persons	0	0	0
25.0 Subtotal, Other Contractual Services	\$74,030	\$78,943	\$4,913
26.0 Supplies and materials	\$4,263	\$4,305	\$42
31.0 Equipment	2,660	2,683	23
32.0 Land and structures	0	0	0
33.0 Investments and loans	0	0	0
41.0 Grants, subsidies and contributions	339,773	333,081	(6,692)
42.0 Insurance claims and indemnities	0	0	0
43.0 Interest and dividends	1	1	0
44.0 Refunds	0	0	0
Subtotal, Non-Pay Costs	\$422,115	\$420,330	(\$1,785)
Total Budget Authority by Object	\$458,972	\$457,104	(\$1,868)

Includes FTEs which are reimbursed from the NIH Common Fund.

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

OBJECT CLASSES	FY 2012 Enacted	FY 2013 PB	Increase or Decrease
Personnel Compensation:			
Full-time permanent (11.1)	\$18,174	\$18,089	(\$85)
Other than full-time permanent (11.3)	6,498	6,505	7
Other personnel compensation (11.5)	774	775	1
Military personnel (11.7)	495	503	8
Special personnel services payments (11.8)	3,307	3,310	3
Total Personnel Compensation (11.9)	\$29,248	\$29,182	(\$66)
Civilian personnel benefits (12.1)	\$7,199	\$7,183	(\$16)
Military personnel benefits (12.2)	410	409	(1)
Benefits to former personnel (13.0)	0	0	0
Subtotal, Pay Costs	\$36,857	\$36,774	(\$83)
Travel (21.0)	\$855	\$776	(\$79)
Transportation of things (22.0)	54	54	0
Rental payments to others (23.2)	13	13	0
Communications, utilities and miscellaneous charges (23.3)	322	330	8
Printing and reproduction (24.0)	144	144	0
Other Contractual Services:			
Advisory and assistance services (25.1)	342	342	0
Other services (25.2)	4,638	4,678	40
Purchases from government accounts (25.3)	30,281	30,353	72
Operation and maintenance of facilities (25.4)	171	171	0
Operation and maintenance of equipment (25.7)	898	898	0
Subsistence and support of persons (25.8)	0	0	0
Subtotal Other Contractual Services	\$36,330	\$36,442	\$112
Supplies and materials (26.0)	\$4,230	\$4,272	\$42
Subtotal, Non-Pay Costs	\$41,948	\$42,031	\$83
Total, Administrative Costs	\$78,805	\$78,805	\$0

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

OFFICE/DIVISION	FY 2011 Actual			FY 2012 Enacted			FY 2013 PB		
	Civilian	Military	Total	Civilian	Military	Total	Civilian	Military	Total
Office of the Director									
Direct:	9	0	9	9	0	9	9	0	9
Reimbursable:	0	0	0	0	0	0	0	0	0
Total:	9	0	9	9	0	9	9	0	9
Office of Extramural Activities									
Direct:	15	0	15	15	0	15	15	0	15
Reimbursable:	0	0	0	0	0	0	0	0	0
Total:	15	0	15	15	0	15	15	0	15
Office of Science Policy and Communications									
Direct:	15	0	15	15	0	15	15	0	15
Reimbursable:	0	0	0	0	0	0	0	0	0
Total:	15	0	15	15	0	15	15	0	15
Office of Resource Management									
Direct:	35	0	35	35	0	35	34	0	34
Reimbursable:	0	0	0	0	0	0	0	0	0
Total:	35	0	35	35	0	35	34	0	34
Division of Epidemiology and Prevention Research									
Direct:	10	0	10	10	0	10	10	0	10
Reimbursable:	0	0	0	0	0	0	0	0	0
Total:	10	0	10	10	0	10	10	0	10
Division of Metabolism and Health Effects									
Direct:	11	0	11	11	0	11	11	0	11
Reimbursable:	0	0	0	0	0	0	0	0	0
Total:	11	0	11	11	0	11	11	0	11
Division of Neuroscience and Behavior									
Direct:	14	0	14	14	0	14	14	0	14
Reimbursable:	0	0	0	0	0	0	0	0	0
Total:	14	0	14	14	0	14	14	0	14
Division of Treatment and Recovery Research									
Direct:	8	0	8	8	0	8	8	0	8
Reimbursable:	0	0	0	0	0	0	0	0	0
Total:	8	0	8	8	0	8	8	0	8
Division of Intramural Research Programs									
Direct:	96	4	100	96	4	100	95	4	99
Reimbursable:	8	0	8	8	0	8	8	0	8
Total:	104	4	108	104	4	108	103	4	107
Total	221	4	225	221	4	225	219	4	223
Includes FTEs which are reimbursed from the NIH Common Fund.									
FTEs supported by funds from Cooperative Research and Development Agreements	0	0	0	0	0	0	0	0	0
FISCAL YEAR	Average GS Grade								
2009	12.6								
2010	12.7								
2011	12.8								
2012	12.8								
2013	12.8								

NATIONAL INSTITUTES OF HEALTH
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Detail of Positions

GRADE	FY 2011 Actual	FY 2012 Enacted	FY 2013 PB
Total, ES Positions	1	1	1
Total, ES Salary	179,700	179,700	179,700
GM/GS-15	23	23	22
GM/GS-14	48	48	47
GM/GS-13	41	41	41
GS-12	30	30	30
GS-11	5	5	5
GS-10	3	3	3
GS-9	8	8	8
GS-8	3	3	3
GS-7	1	1	1
GS-6	0	0	0
GS-5	2	2	2
GS-4	0	0	0
GS-3	0	0	0
GS-2	0	0	0
GS-1	0	0	0
Subtotal	164	164	162
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	1	1	1
Full Grade	0	0	0
Senior Assistant Grade	0	0	0
Assistant Grade	0	0	0
Subtotal	4	4	4
Ungraded	72	72	72
Total permanent positions	169	169	167
Total positions, end of year	241	241	239
Total full-time equivalent (FTE) employment, end of year	225	225	223
Average ES salary	179,700	179,700	179,700
Average GM/GS grade	12.8	12.8	12.8
Average GM/GS salary	107,043	107,043	107,043

Includes FTEs which are reimbursed from the NIH Common Fund.