

Department of Health and Human Services

National Institutes of Health

Overall Appropriations

<u>FY 2014 Budget</u>	<u>Page No.</u>
Appropriation Language	2
Language Analysis.....	8
Authorizing Legislation	9
Appropriations History	10
Appropriations Not Authorized by Law	11
Narrative by Activity	12
Program Descriptions and Accomplishments.....	13
Funding History	21
Summary of the Request: Narrative.....	22
Key Outputs and Outcomes Tables	28

**National Institutes of Health
FY 2014 Congressional Justification**

2014 APPROPRIATIONS LANGUAGE

NATIONAL CANCER INSTITUTE

For carrying out section 301 and title IV of the PHS Act with respect to cancer, \$5,125,951,000, of which up to \$8,000,000 may be used for facilities repairs and improvements at the National Cancer Institute – Frederick Federally Funded Research and Development Center in Frederick, Maryland.

NATIONAL HEART, LUNG, AND BLOOD INSTITUTE

For carrying out section 301 and title IV of the PHS Act with respect to cardiovascular, lung, and blood diseases, and blood and blood products, \$3,098,508,000.

NATIONAL INSTITUTE OF DENTAL AND CRANIOFACIAL RESEARCH

For carrying out section 301 and title IV of the PHS Act with respect to dental and craniofacial diseases, \$411,515,000.

NATIONAL INSTITUTE OF DIABETES AND DIGESTIVE AND KIDNEY DISEASE

For carrying out section 301 and title IV of the PHS Act with respect to diabetes and digestive and kidney disease, \$1,811,786,000.

NATIONAL INSTITUTE OF NEUROLOGICAL DISORDERS AND STROKE

For carrying out section 301 and title IV of the PHS Act with respect to neurological disorders and stroke, \$1,642,619,000.

NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASE

For carrying out section 301 and title IV of the PHS Act with respect to allergy and infectious diseases, \$4,578,813,000.

NATIONAL INSTITUTE OF GENERAL MEDICAL SCIENCES

For carrying out section 301 and title IV of the PHS Act with respect to general medical sciences, \$2,401,011,000.

EUNICE KENNEDY SHRIVER NATIONAL INSTITUTE OF CHILD HEALTH AND HUMAN DEVELOPMENT

For carrying out section 301 and title IV of the PHS Act with respect to child health and human development, \$1,339,360,000.

NATIONAL EYE INSTITUTE

For carrying out section 301 and title IV of the PHS Act with respect to eye diseases and visual disorders, \$699,216,000.

NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES

For carrying out section 301 and title IV of the PHS Act with respect to environmental health sciences, \$691,348,000.

**NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES
(Interior Appropriation)**

For necessary expenses for the National Institute of Environmental Health Sciences in carrying out activities set forth in section 311(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and section 126(g) of the Superfund Amendments and Reauthorization Act of 1986, \$79,411,000.

NATIONAL INSTITUTE ON AGING

For carrying out section 301 and title IV of the PHS Act with respect to aging, \$1,193,370,000.

NATIONAL INSTITUTE OF ARTHRITIS AND MUSKULOSKELETAL AND SKIN DISEASE

For carrying out section 301 and title IV of the PHS Act with respect to arthritis and musculoskeletal and skin diseases, \$540,993,000.

NATIONAL INSTITUTE ON DEAFNESS AND COMMUNICATION DISORDERS

For carrying out section 301 and title IV of the PHS Act with respect to deafness and other communication disorders, \$422,936,000.

NATIONAL INSTITUTE OF NURSING RESEARCH

For carrying out section 301 and title IV of the PHS Act with respect to nursing research, \$146,244,000.

NATIONAL INSTITUTE ON ALCOHOL ABUSE AND ALCOHOLISM

For carrying out section 301 and title IV of the PHS Act with respect to alcohol abuse and alcoholism, \$463,848,000.

NATIONAL INSTITUTE ON DRUG ABUSE

For carrying out section 301 and title IV of the PHS Act with respect to drug abuse, \$1,071,612,000.

NATIONAL INSTITUTE OF MENTAL HEALTH

For carrying out section 301 and title IV of the PHS Act with respect to mental health, \$1,465,782,000.

NATIONAL HUMAN GENOME RESEARCH INSTITUTE

For carrying out section 301 and title IV of the PHS Act with respect to human genome research, \$517,319,000.

NATIONAL INSTITUTE OF BIOMEDICAL IMAGING AND BIOENGINEERING

For carrying out section 301 and title IV of the PHS Act with respect to biomedical imaging and bioengineering research, \$338,892,000.

NATIONAL CENTER FOR COMPLEMENTARY AND ALTERNATIVE MEDICINE

For carrying out section 301 and title IV of the PHS Act with respect to complementary and alternative medicine, \$129,041,000.

NATIONAL INSTITUTE ON MINORITY HEALTH AND HEALTH DISPARITIES

For carrying out section 301 and title IV of the PHS Act with respect to minority health and health disparities research, \$283,299,000.

JOHN E. FOGERTY INTERNATIONAL CENTER

For carrying out the activities of the John E. Fogarty International Center (described in subpart 2 of part E of title IV of the PHS Act), \$72,864,000.

NATIONAL LIBRARY OF MEDICINE

For carrying out section 301 and title IV of the PHS Act with respect to health information communications, \$382,252,000, of which \$4,000,000 shall be available until September 30, 2015, for improvement of information systems: Provided, That in fiscal year 2014, the National Library of Medicine may enter into personal services contracts for the provision of services in facilities owned, operated, or constructed under the jurisdiction of the National Institutes of Health (referred to in this title as "NIH"): Provided further, That in addition to amounts provided herein, \$8,200,000 shall be available from amounts available under section 241 of the PHS Act to carry out the purposes of the National Information Center on Health Services Research and Health Care Technology established under section 478A of the PHS Act and related health information services.

NATIONAL CENTER FOR ADVANCING TRANSLATIONAL SCIENCES

For carrying out section 301 and title IV of the PHS Act with respect to translational sciences, \$665,688,000: Provided, That up to \$50,000,000 shall be available to implement section 480 of the PHS Act, relating to the Cures Acceleration Network.

OFFICE OF THE DIRECTOR (Including Transfer of Funds)

For carrying out the responsibilities of the Office of the Director, NIH, \$1,473,398,000, of which up to \$25,000,000 shall be used to carry out section 211 of this Act: Provided, That funding shall be available for the purchase of not to exceed 29 passenger motor vehicles for replacement only: Provided further, That NIH is authorized to collect third-party payments for the cost of clinical services that are incurred in NIH research facilities and that such payments shall be credited to the NIH Management Fund: Provided further, That all funds credited to the NIH Management Fund shall remain available for one fiscal year after the fiscal year in which they are deposited: Provided further, That \$572,948,000 shall be available for the Common Fund established under section 402A(c)(1) of the PHS Act: Provided further, That of the funds provided \$10,000 shall be for official reception and representation expenses when specifically approved by the Director of the NIH: Provided further, That the Office of AIDS Research within the Office of the Director of the NIH may spend up to \$8,000,000 to make grants for construction or renovation of facilities as provided for in section 2354(a)(5)(B) of the PHS Act: Provided further, That the Director may direct up to 1 percent of the total made available in this or any other Act to all National Institutes of Health appropriations to activities that the Director may so designate: Provided further, That no such appropriation shall be decreased by more than 1 percent by any such transfers and that the Congress is promptly notified of the transfer.

BUILDINGS AND FACILITIES

For the study of, construction of, renovation of, and acquisition of equipment for, facilities of or used by NIH, including the acquisition of real property, \$126,111,000, to remain available until expended.

2014 GENERAL PROVISIONS

SEC. 202. None of the discretionary funds appropriated in this title shall be used to pay the salary of an individual, through a grant or other extramural mechanism, at a rate in excess of Executive Level II.

(transfer of funds)

SEC. 205. The Director of the NIH, jointly with the Director of the Office of AIDS Research, may transfer up to 3 percent among institutes and centers from the total amounts identified by these two Directors as funding for research pertaining to the human immunodeficiency virus: Provided, That the Committees on Appropriations of the House of Representatives and the Senate are notified at least 15 days in advance of any transfer.

(transfer of funds)

SEC. 206. Of the amounts made available in this Act for NIH, the amount for research related to the human immunodeficiency virus, as jointly determined by the Director of NIH and the Director of the Office of AIDS Research, shall be made available to the "Office of AIDS Research" account. The Director of the Office of AIDS Research shall transfer from such account amounts necessary to carry out section 2353(d)(3) of the PHS Act.

SEC. 211. (a) AUTHORITY.—Notwithstanding any other provision of law, the Director of NIH ("Director") may use funds available under section 402(b)(7) or 402(b)(12) of the PHS Act to enter into transactions (other than contracts, cooperative agreements, or grants) to carry out research identified pursuant to such section 402(b)(7) (pertaining to the Common Fund) or research and activities described in such section 402(b)(12).

(b) PEER REVIEW.—In entering into transactions under subsection (a), the Director may utilize such peer review procedures (including consultation with appropriate scientific experts) as the Director determines to be appropriate to obtain assessments of scientific and technical merit. Such procedures shall apply to such transactions in lieu of the peer review and advisory council review procedures that would otherwise be required under sections 301(a)(3), 405(b)(1)(B), 405(b)(2), 406(a)(3)(A), 492, and 494 of the PHS Act.

SEC. 214. Not to exceed \$45,000,000 of funds appropriated by this Act to the institutes and centers of the National Institutes of Health may be used for alteration, repair, or improvement of facilities, as necessary for the proper and efficient conduct of the activities authorized herein, at not to exceed \$3,500,000 per project.

(transfer of funds)

SEC. 215. Of the amounts made available for NIH, 1 percent of the amount made available for National Research Service Awards ("NRSA") shall be made available to the Administrator of the Health Resources and Services Administration to make NRSA awards for research in primary medical care to individuals affiliated with entities who have received grants or contracts under section 747 of the PHS Act, and 1 percent of the amount made available for NRSA shall be made

available to the Director of the Agency for Healthcare Research and Quality to make NRSA awards for health service research.

SEC. 218. Funds provided to the National Institutes of Health in this and subsequent acts may be used to support the Sanctuary System for Surplus Chimpanzees authorized by section 404K of the Public Health Service Act, including for the construction, renovation, and funding of current or additional facilities of the sanctuary system as authorized by section 404K, notwithstanding the limitations in subsection (g) of such section.

**National Institutes of Health
FY 2014 Congressional Justification**

Language Analysis

Language Provision	Explanation
National Institute of Environmental Health Sciences, Superfund: “.....of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 [, as amended,] and section 126(g) of the Superfund Amendments.....”	Recommend the language be removed because it is no longer necessary.
National Library of Medicine: “.....of which \$4,000,000 shall be available until September 30, [2014] 2015 for improvement of information systems; Provided, That in fiscal year [2013] 2014, the National Library of Medicine may enter into personal services contracts.....”	NIH is requesting availability of funds for two years.
National Library of Medicine: “.....established under section 478A of the PHS Act and related to the health <i>information</i> services.....”	Recommend the language be added to further clarify NLM services.
National Center for Advancing Translational Sciences: “.....shall be available to implement [402C] 480 of the PHS Act, relating to the Cures Acceleration Network.”	Previous appropriations bill (P.L. 112-74) redesignated section 402C of the PHS Act.
Office of the Director: “.....of which up to \$25,000,000 shall be used to carry out section [212] 211 of this Act:.....”	Recommend the language be updated to coincide with current General Provisions.
<i>General Provisions: “SEC. 218. Funds provided to the National Institutes of Health in this and subsequent acts may be used to support the Sanctuary System for Surplus Chimpanzees authorized by section 404K of the Public Health Service Act, including for the construction, renovation, and funding of current or additional facilities of the sanctuary system as authorized by section 404K, notwithstanding the limitations in subsection (g) of such section.”</i>	Recommend the proposed language to remove the statutory cap that limits federal funding to the sanctuary system for surplus chimpanzees; the \$30 million cumulative cap is expected to be reached in the first quarter of FY 2014 and removing the cap is necessary to allow federal support to continue the care of these retired research chimpanzees.

**National Institutes of Health
FY 2014 Congressional Justification**

**Authorizing Legislation
(Dollars in Thousands)**

	FY 2013 Amount Authorized	FY 2013 Appropriations Act	FY 2014 Amount Authorized	FY 2014 President's Budget
National Institutes of Health:				
Sec 301 and Title IV of the PHS Act	\$30,898,864	\$30,898,864	\$31,173,187	\$31,173,187
Section 330B(b)(2) of the PHS Act	\$150,000	\$150,000	\$150,000	\$150,000
Section 311(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, and Section 126(g) of the Superfund Amendments and Reauthorization Act of 1985	\$79,411	\$79,411	\$79,411	\$79,411

NATIONAL INSTITUTES OF HEALTH

Appropriation History¹

Fiscal Year	Budget Request to Congress	House Allowance	Senate Allowance	Appropriation
2001	18,812,735,000 ²	20,512,735,000	20,512,735,000	20,458,130,000 ³
2002	23,112,130,000	22,945,199,000	23,765,488,000	23,296,382,000 ⁴
2003	27,343,417,000 ⁵	27,351,717,000	27,369,000,000	27,066,782,000 ⁶
2004	27,892,765,000	28,043,991,000	28,369,548,000	27,887,512,000 ⁷
2005	28,757,357,000	28,657,357,000	28,901,185,000	28,495,157,000 ⁸
2006	28,740,073,000	28,737,094,000	29,644,804,000	28,461,417,000 ⁹
2007	28,578,417,000	28,479,417,000 ¹⁰	28,779,081,000 ¹⁰	29,030,004,000 ¹¹
2008	28,849,675,000	29,899,004,000	30,129,004,000	29,312,311,000 ¹²
2008 Supp.				150,000,000
2009	29,457,070,000	30,607,598,000	30,404,524,000 ¹³	30,545,098,000
2009 ARRA				10,400,000,000 ¹⁴
2010	30,988,000,000	31,488,000,000	30,988,000,000	30,934,413,000 ¹⁵
2011	32,136,209,000		31,989,000,000	30,935,000,000 ¹⁶
2012	31,979,000,000		30,630,423,000	30,852,187,000 ¹⁷
2013	30,852,187,000		30,810,387,000	
2014 PB	31,323,187,000			

¹ Does not include comparability adjustments. Superfund and Type 1 diabetes are included except where indicated. Separate appropriation for Superfund Research activities at NIEHS beginning in FY 2001. Includes amounts authorized to the NIDDK for Type 1 diabetes research beginning with the FY 2002 Appropriation.

² Reflects: \$2,111,224,000 for HIV research in the NIH Office of AIDS Research.

³ Reflects: a) \$2,244,987,000 appropriated to the ICs for HIV research, b) across-the-board reduction of \$8,666,000 and c) \$5,800,000 transferred to the DHHS.

⁴ Reflects: \$2,535,672,000 appropriated to the ICs for HIV research and \$10.5 million appropriated from the Emergency Relief Fund, b) across-the-board reduction of \$9,273,000, c) rescissions for Labor/HHS (\$22,946,000) and government-wide (\$34,243,000) and d) transfer of \$100M to the Global Fund for HIV/AIDS, Malaria, and Tuberculosis.

⁵ Excludes \$583,000 transferred to the Department of Homeland Security.

⁶ Reflects: a) \$2,747,463,000 appropriated to the ICs for HIV research and NIH's share of across-the-board reduction of \$177,085,000, b) transfers of \$99,350,000 to the Global Fund for HIV/AIDS, Malaria, and Tuberculosis, and \$583,000 to the Department of Homeland Security.

⁷ Reflects: a) \$2,850,581,000 appropriated to the ICs for HIV research, b) across-the-board reduction of \$165,459,000, c) Labor/HHS rescission of \$17,492,000, and d) transfer of \$149,115,000 to the Global Fund for HIV/AIDS, Malaria, and Tuberculosis.

⁸ Reflects: a) \$2,920,551,000 appropriated to the ICs for HIV research, b) across-the-board reduction of \$229,390,000, b) Labor/HHS rescission of \$6,787,000, c) transfer of \$99,200,000 to the Global Fund for HIV/AIDS, Malaria, and Tuberculosis.

⁹ Reflects: a) \$2,903,664,000 appropriated to the ICs for HIV research, b) NIH share of Government-wide rescission of \$287,356,000, and c) transfer of \$99,000,000 to the Global Fund for HIV/AIDS, Malaria, and Tuberculosis.

¹⁰ Reflects funding levels approved by the Appropriations Committees.

¹¹ Reflects: a) \$2,905,802,000 appropriated to the ICs for HIV research, b) add-on for pay cost of \$18,087,000, c) transfer of \$99,000,000 to the Global Fund, and d) Supplemental Bill transfer of \$99,000,000.

¹² Reflects: a) \$2,928,345,000 appropriated to the ICs for HIV research, b) NIH share of the Government-wide rescission of \$520,929,000, c) transfer of \$294,759,000 to the Global Fund, and d) a supplemental appropriation of \$150,000,000 reflected below.

¹³ Excludes funding for Superfund Research activities for which the Appropriations Committee did not mark up a figure.

¹⁴ Provided under P.L. 111-5.

¹⁵ Reflects Labor/HHS appropriation of \$30,705,201,000; transfer of \$300,000,000 to Global AIDS funds; \$1,000,000 transfer from HHS for the Interagency Autism Coordinating Committee and Secretary's 1% transfer to HHS of \$4,587,000.

¹⁶ Reflects: \$3,059,277,000 appropriated to the ICs for HIV research; \$998,000 transfer from HHS to the Interagency Autism Coordinating Committee.

¹⁷ Reflects: \$3,074,921,000 appropriated to the ICs for HIV research; Omnibus Across-the-Board rescission of \$58,130,567 and the Secretary's transfer of \$8,726,791.

**National Institutes of Health
FY 2014 Congressional Justification**

Appropriations Not Authorized by Law

This is not applicable to NIH.

**National Institutes of Health
FY 2014 Congressional Justification**

Narrative by Activity

**National Institutes of Health
(Dollars in Thousands)**

	FY 2012 Actual	FY 2013 CR	FY 2014 President's Budget	FY 2014 +/- FY 2012
Program Level ¹	\$ 30,860,387	\$ 31,057,115	\$ 31,331,387	\$ 471,000
FTE.....	18,493	18,493	18,493	--

Note: FY 2012 and FY 2013 figures are shown on a comparability basis to FY 2014.

¹ Includes Mandatory Type 1 Diabetes, Superfund and NLM Program Evaluation of \$8.2 million in FY 2012, \$8.25 million in FY 2013, and \$8.2 million in FY 2014.

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

Allocation Method.....Competitive Grant
 Allocation Method.....Contract
 Allocation Method.....Intramural
 Allocation Method.....Other

Program Descriptions and Accomplishments

NIH continues to undertake organizational initiatives and reforms to ensure that its structure is optimized. In December 2010, the Scientific Management Review Board (SMRB) recommended that NIH establish a new national center focused on supporting and strengthening translational medicine and therapeutics development. A year later, the National Center for Advancing Translational Sciences (NCATS) was officially established by the Consolidated Appropriations Act, 2012 (PL 112-74) to advance translational sciences through coordinating and developing resources that leverage basic research in support of translational science. The mission of NCATS is to catalyze the generation of innovative methods and technologies that will enhance the development, testing, and implementation of diagnostics and therapeutics across a wide range of human diseases and conditions. This Act also appropriated up to \$10 million for the Cures Acceleration Network (CAN) (authorized by the Affordable Care Act), which is being managed by NCATS. CAN focuses research efforts on advancing the development of high need cures and reducing barriers to translation in areas not pursued by the private sector.

Also, in November of 2010, the SMRB concurred with its Substance Use, Abuse, and Addiction Working Group that the current organization of substance use, abuse, and addiction-related research was not optimal and that some form of reorganization was necessary. The SMRB endorsed the Working Group conclusion that the reorganization must encompass all addiction-related research at the NIH and recommended that the “NIH director ...move to implement...the establishment of a new institute focusing on addiction-related research and related public health initiatives.” The other option presented to the SMRB by the Working Group was the functional integration of existing research resources, rather than creation of a new institute. After two years of in-depth portfolio analysis and extensive stakeholder outreach, NIH concluded that functional integration, rather than major structural reorganization, would best advance substance use, abuse, and addiction-related research. To that end, the NIH Institutes and Centers with substance use, abuse, and addiction-related research will retain their institutional identities while strengthening their ongoing efforts to integrate related research programs. NIH has begun implementing this functional approach and is developing metrics to ensure that we reach our goals to enhance the conduct and support of research in these areas that are so vital to our nation’s health.

A third SMRB recommendation called for changes to the NIH Clinical Center (CC), including an expanded vision and role; a streamlined governance structure; and a stable, adequate budget for fiscal viability and sustainability. NIH has assembled senior scientific experts to form the CC-Extramural Collaborations Committee to develop ways to enhance the utilization of the CC by extramural investigators. A key initiative is a Funding Opportunity Announcement that was issued in January 2013, and will promote clinical research collaborations between intramural and extramural investigators. NIH has also formed the Clinical Center Governing Board to provide strategic and operational oversight with the objective of facilitating high quality, cost-effective clinical research at the Clinical Center. The Board also provides budget recommendations that promote stable funding, consistent with the intent of the SMRB. The Clinical Center will continue to be funded through the NIH Management Fund for FY 2014, and funding recommendations to the NIH Director will be made by the Clinical Center Governing Board.

Long-Range NIH Research Contributions to Improvements in Health Care and Public Health: Selected Examples

NIH has supported biomedical research to enhance health, lengthen life, and reduce the burdens of illness and disability for over 100 years. Between 1970 and 2005, the life expectancy of the average American increased by 6.6 years.¹ Significant increases have been seen in life expectancy at age 65, increasing almost 40 percent from 13.9 years to 19.2 years since 1950.² NCI's 2012 *Report to the Nation on the Status of Cancer* shows that cancer death rates have been in continuous decline since the early 1990s. We can attribute these remarkable improvements, in large part, to NIH research. NIH-funded projects have made many other contributions that have advanced health care and enhanced public health. The following are some selected examples.

Heart Disease

Through research advances supported by NIH, deaths from heart diseases have fallen by over 60 percent since 1970.³ The identification of cardiac risk factors such as smoking, high blood pressure, and high cholesterol by the Framingham Heart Study along with NIH-supported clinical trials led to the development of effective pharmacological and behavioral interventions, as well as safe and effective surgical and catheter-based procedures to open clogged coronary arteries.

Diabetes

Adults diagnosed with diabetes during middle age used to live on average ten years less than adults without diabetes. Thanks to the development of early screening methods and treatments that enable better control of diabetes-related complications, adults with diabetes are living longer and healthier lives. Between 1997 and 2006, the death rate among adults with diabetes declined by 23 percent for all-causes of death and by an extraordinary 40 percent for cardiovascular disease.⁴ These remarkable improvements are due largely to clinical trials supported by NIH that demonstrated how effective monitoring glucose metabolism is in controlling type 2 diabetes and preventing its complications. NIH supported research also validated the test used to assess diabetic control. The test, a marker called hemoglobin A1c (HbA1c), determines the average amount of blood sugar over a six to 12 week period, and it is used in conjunction with home blood sugar monitoring tests, which were also developed through NIH-funded research. NIH research is also generating important insights into the prevention of diabetes. Studies funded through the Diabetes Prevention Program have shown that lifestyle changes, such as diet and physical activity, can lower the risk of developing type 2 diabetes by 58 percent in adults at high risk for diabetes.

¹ Calculated from *Health, United States, 2010: with Special Feature on Death and Dying* <http://www.cdc.gov/nchs/data/hus/hus10.pdf>.

² Calculated from *Health, United States, 2010: with Special Feature on Death and Dying* <http://www.cdc.gov/nchs/data/hus/hus10.pdf> and *National Vital Statistics Reports Deaths: Preliminary Data for 2011 Vol. 61, Number 6* http://www.cdc.gov/nchs/data/nvsr/nvsr61/nvsr61_06.pdf.

³ Calculated from *Health, United States, 2010: with Special Feature on Death and Dying* <http://www.cdc.gov/nchs/data/hus/hus10.pdf> and *National Vital Statistics Reports Deaths: Preliminary Data for 2011 Vol. 61, Number 6* http://www.cdc.gov/nchs/data/nvsr/nvsr61/nvsr61_06.pdf.

⁴ Gregg, E.W. et al. *Diabetes Care* 35, 1252–1257 (2012). *CDC News*: http://www.cdc.gov/diabetes/news/docs/cvd_2012.htm.

Lung Cancer

Lung cancer is the second most common cancer and is the primary cause of cancer-related death in both men and women in the United States. NIH-funded research has led to a decrease in mortality, lowering the death rate per 100,000 people from 77.0 in 1999 to 64.0 in 2008. The recent development of targeted therapies, such as erlotinib and crizotinib, have led to dramatic responses in individuals whose lung cancers harbor particular genetic mutations.

Breast Cancer

Primarily because of NIH-supported research, several breast cancer susceptibility genes have now been identified, including BRCA1, BRCA2, TP53, and PTEN/MMAC1. Genetic testing now allows for tailored, safer, and more efficient treatments. As a result of these and many other advances, the death rate from breast cancer per 100,000 people declined from 19.0 to 12.3 between 1988 and 2010.

Prostate Cancer

NIH-supported research on the treatment of prostate cancer has improved surgical approaches as well as radio-, chemo-, and hormonal therapies. The success of these advances has contributed to the significant decline in the death rate. Between 1999 and 2008, prostate cancer deaths per 100,000 men dropped from 31.6 to 22.8.

Infant Health

In the 1960s, more than 25 of every 1,000 babies born in the United States died before their first birthday. By 2006, the infant mortality rate was 6.7 per 1,000 births, half that of a generation before. A sustained, long-term effort informed in large part by NIH research led to these substantial improvements in the survival rates of infants born preterm and to advances in care for all newborns.

Adolescent Risk Behavior

In the last three decades, biological, epidemiological, and social science discoveries funded by NIH have produced a detailed understanding of the risks and mechanisms that lead to drug abuse and addiction. This knowledge in turn has informed several new science-based prevention approaches. Today, the rate of cigarette smoking and alcohol use by teenagers are at their lowest point since the Monitoring the Future (MTF) survey, funded by NIH, began tracking drug use and attitudes of teens in 1975.

Burns and Traumatic Injury

NIH funded research on fluid resuscitation, wound cleaning, skin replacement, infection control, and nutritional support has greatly improved the chances of surviving catastrophic burns and traumatic injuries. In the mid-1970s burns that covered even 25 percent of the body were almost always fatal. Today, people with burns covering 90 percent of their bodies can survive, although not often without some impairments. From 1985 to 2010, the death rate per 100,000 people from motor vehicle traffic injury decreased from 18.5 to 11.2. These dramatic increases in survival rates as well as increased health, functioning, and quality of life of survivors, are in large part due to research findings that have transformed clinical practice.

Stroke

Fewer people are dying of stroke today—age-adjusted stroke mortality rate has decreased 70 percent since 1950 and 33 percent since 1996. In 1995, an NIH-funded clinical trial established the first FDA-approved treatment for acute ischemic stroke. The drug tPA reduces the risk of disability and maximizes the potential for patient recovery. A recent analysis estimated that tPA can provide considerable cost savings—nearly \$74 million annually for the first post-stroke year alone—if used in just 20 percent of all ischemic stroke patients in the US.

Age-Related Macular Degeneration (AMD)

A major cause of blindness and the leading cause of new cases of blindness in people over age 65, Age-Related Macular Degeneration (AMD), was largely untreatable prior to the 1990s. In 1991, a NIH-funded clinical trial established the value of laser treatment for advanced AMD to stabilize the condition. In 2001, NIH researchers announced that a daily regimen of antioxidant vitamins and minerals delayed the onset of advanced AMD by 25 percent. In 2012, a clinical trial supported by NIH showed that long-term treatment of AMD with either the drug Avastin or the drug Lucentis resulted in dramatic and lasting improvement in vision, such that two-thirds of patients had driving vision (20/40 vision or better). More recently, cell-based therapy for AMD is being vigorously pursued as a potentially curative measure.

Hearing Loss

NIH-supported research has driven the development of hearing aids from the first electronic hearing devices invented in the 1950s to the sophisticated digital devices available today. Innovative collaborations between the NIH, the Department of Veterans Affairs (VA), and the National Aeronautics and Space Administration (NASA) have significantly improved hearing aid technology over the past 20 years. In addition to amplifying sound, today's hearing aids are able to address the challenges of understanding speech, localizing sound, and hearing in noisy environments. Furthermore, many children born with congenital deafness can now be successfully treated with cochlear implants, giving them a lifetime of hearing.

Science Advances

Thousands of new findings are reported every year by NIH-funded scientists. Many of these findings are like pieces of a complex puzzle; taken together and over time, they provide the scientific basis for significant improvements in health. Listed below are just a few of the many recent accomplishments from NIH research:

- The HPTN 052 clinical trial, an international HIV prevention trial sponsored by NIH, demonstrated that antiretroviral medications not only treat HIV but can also prevent the transmission of HIV infection among heterosexual individuals. The study found that if HIV-infected heterosexual individuals begin taking antiretroviral medicines when their immune systems are relatively healthy, as opposed to delaying therapy until the disease has advanced, then they are 96 percent less likely to transmit the virus to their uninfected partners.
- Data from recent research have demonstrated that aggressive lymph node removal is not necessary for some women with early-stage breast cancer when the cancer cells are found in the adjacent lymph nodes. This advance could potentially spare thousands of women the often extensive life-long side effects of a full axillary lymph node removal, which can include pain and chronic swelling, usually of the arm or leg, due to a blockage of the lymph passages.
- Calcium deposits known as coronary artery calcium (CAC), which occur in the atherosclerotic plaques of coronary arteries, are easily detected using fast CT scanning. Investigators recently demonstrated for the first time that the measurement of CAC can accurately identify patients who are at high risk of cardiovascular events and would benefit from more intensive preventive treatment. The next step is to confirm these results in a randomized controlled trial.
- A recent study established the anatomical and functional connections of a pain pathway thought to underlie migraine headaches. The researchers found that trigeminovascular neurons project to anatomically distinct cortical areas involved in a diverse range of functions. This pattern of connections may explain the diversity of neurological symptoms associated with migraine headaches.
- Researchers reported the most conclusive evidence to date that an athlete's brain remains injured even after symptoms of a recent concussion have disappeared and that these brain changes are undetectable by commonly used neuropsychological tests. The researchers used functional MRI to demonstrate brain changes about ten days after a sports-related concussion that were not detected by conventional clinical and neuropsychological examinations.
- Being able to diagnose and assess diseases in real-time is a major public and global health goal. Advances are being made in smartphone-enabled detection of biologics using a chip based micro nuclear magnetic resonance (NMR) unit. Early work suggests

that a 30-minute biologic analysis may be more accurate for cancer detection than conventional core biopsy.

- Asthma affects 300 million people worldwide. New understanding of the role of genes in the disorder is shedding light on why individuals respond differently to treatment. Inhaled glucocorticoids are the most common medication prescribed for treating asthma, but many people do not benefit from the therapy. A recent study has shown that response to glucocorticoids in asthmatics is linked to variants in the *GLCC11* gene.
- Approximately 100,000 people are affected by retinitis pigmentosa (RP), an inherited degenerative disease that causes severe vision impairment and, often, blindness. RP destroys the cells in the retina that detect light. A major advance in the treatment of RP was achieved in February 2013 with FDA's approval of an artificial retina called ARGUS II. The device consists of a miniature video camera mounted on a pair of sunglasses that converts images into electrical impulses that are transmitted to a tiny electrode implanted in the retina. Stimulating the retina restores visual perception, allowing users to perform basic functions such as walking across a street unaided. Building on this therapy, researchers are now developing higher resolution retinal prostheses that will enable even more complex visual functions to be performed such as reading a book. Methicillin-resistant *Staphylococcus aureus* (MRSA) is now a leading cause of severe infections in hospitals. NIH scientists and colleagues in China have identified a gene that has been playing a pivotal role in epidemic waves of MRSA infections in Asia. The finding may provide a potential target for novel therapeutics to combat these life-threatening infections
- People with autism spectrum disorders (ASD) generally have trouble with social interactions and communication. For at least 70 percent of ASD cases, there are still no known underlying genetic causes. A trio of new studies has revealed several genes and biological pathways that may contribute to ASD. Among other insights, the findings may help explain earlier evidence linking autism risk to fathers. The studies reveal that fathers are 4 times more likely than mothers to transmit *de novo* mutations that increase ASD risk to their children and that these mutations increase with the father's age.
- NIH-funded researchers have been developing a brain-computer interface system called BrainGate, in which a tiny sensor containing 96 hair-thin electrodes is inserted into the motor cortex, a part of the brain that controls movement. When electrodes sense brain cell activity, the system turns these signals into digital commands for external devices. New results from an ongoing clinical trial described two patients paralyzed by stroke who were able to learn to perform tasks, such as reaching for and grasping foam balls, by using their thoughts to control a robotic arm. This advance may help restore some independence and improve quality of life for people who have lost the use of their limbs.
- As people age, the rate of bone loss outpaces bone growth. For women, the rate of bone loss can rise steeply after menopause. In pre-clinical studies with mice, researchers have developed a way to direct the body's own stem cells to the outer bone to build new,

strong bone tissue. The method may lead to new treatments for osteoporosis and other bone diseases that affect millions of people.

- Cytomegalovirus (CMV) infection, a major cause of hearing loss in children, is the most common infection passed from a mother to her unborn child. Between 20,000 and 30,000 infants are infected with the virus upon birth each year. Researchers have previously shown that newborn screening using blood spots predicted CMV infection accurately only 30 to 40 percent of the time. In an attempt to improve the sensitivity and specificity of the test, the team found that using dried saliva samples significantly increases the accuracy of the screening – to 97.4 percent. Better CMV screening could help doctors determine which babies need to be monitored for symptoms, so they can treat them as quickly as possible.
- Alzheimer's disease affects more than five million Americans. Past NIH-supported studies have revealed that a gene called APOE has the strongest connection to the most common, late-onset form of the disease. Recently, NIH-funded researchers have discovered a mechanism behind how APOE contributes to Alzheimer's disease in the brain. The finding suggests possible strategies for prevention as well as a potential new drug target called cyclophilin A, an inflammatory molecule that is controlled by APOE.
- High doses of radiation—whether from medical therapy or a large-scale nuclear emergency—can harm the body in many ways. Two biological drugs (aPC and Thbd) can block the deadly effects of radiation poisoning in mice when given up to 24 hours after exposure. The finding points to a possible new way to protect against radiation injury from environmental exposures or cancer therapy.
- Parkinson's disease is a neurologic disorder that destroys neurons in the brain, leading to involuntary shaking, slowed movements, muscle stiffness, and other symptoms. There are no treatments to slow or stop the disease; current medications only manage the symptoms of the disease. NIH-funded scientists have found a method to reprogram skin cells from patients into induced pluripotent stem cells and then into neurons, including the type that die in Parkinson's disease. The technology can help researchers understand how the disease develops and use that information to design new therapeutic approaches.
- Lymphedema is a common and often painful condition affecting an estimated ten million people in the United States where it usually develops as a consequence of cancer-related radiation therapy. Currently, lymphedema is diagnosed only after the main symptom, swelling of one or more limbs, is detected. However, at this stage the condition is difficult, if not impossible to reverse. Research funded by NIH has led to the discovery of a protein, found circulating in blood that has potential to allow for early detection and lead to better treatment options.
- NIH-funded scientists were able to forecast seasonal flu outbreaks using an approach common to weather prediction. The ability to predict the timing and severity of seasonal flu outbreaks can help health officials and the general public better prepare and manage

the seasonal flu outbreaks that strike each year. The scientists expect the accuracy of their model's predictions to rise as more years of Google Flu Trends data and more locations become available. The approach can also be adapted to develop predictions for other seasonally recurring respiratory diseases, such as respiratory syncytial virus—a major cause of respiratory infections in children—and rhinovirus, which causes the common cold.

- Research supported by NIH suggests that early-life exposure to antibiotics affects gut microbes and changes how food is metabolized. For example, researchers found that children who were given antibiotics during the first six months of life were more likely to have a higher body mass and were more likely to be overweight by 3 years of age than those who were not given the drugs. This work suggests that antibiotics given early in life might affect the risk for becoming overweight. Much more research will be needed to confirm this connection, but if true, this research may have important implications for preventing childhood obesity.

**National Institutes of Health
FY 2014 Congressional Justification**

Funding History^{1,2}

2010	\$31,239,000,000
2011	\$30,935,000,000
2012	\$30,852,187,000
2013 CR	\$31,048,865,000
2014 PB	\$31,323,187,000

¹ Annual amount includes budget authority from: (1) mandatory appropriations for the Special Type 1 Diabetes Research Program (\$150 million); (2) Superfund Research program derived from Interior Appropriations. Also includes (3) \$998,000 transfer-in from HHS for General Departmental Management (GDM) transfer for Interagency Autism Coordinating Committee for FY 2010 and FY 2011.

² PHS Evaluation Fund allocation to NLM is not included in these figures.

Summary of the Request: Narrative ⁵

For FY 2014, the NIH requests a program level of \$31.331 billion, a \$0.471 billion or 1.5 percent increase above the FY 2012 program level of \$30.860 billion. Within the FY 2014 requested level, NIH will invest in areas of the most extraordinary promise for biomedical research and enhance the scientific workforce, working to recruit and retain the best and brightest from all of our nation's diverse populations to tackle major health challenges facing the Nation now and in the future. This request preserves NIH's highest priority activities. The following summary discusses estimates of budget mechanism amounts, which change throughout the course of the year due to scientific opportunities and the results of peer review. Mechanism and sub-mechanism levels are not proposed programs, projects, and activities.

Research Project Grants: Research project grants (RPGs) are the primary mechanism for funding of investigator-initiated biomedical research. These grants support new and experienced investigators in broad-based research programs. The use of RPGs as a mechanism of support covers the entire medical research continuum, from basic scientific research at the molecular and cellular levels to studies of human beings in both healthy and diseased states. Most grant applications originate with individual investigators who develop proposals for research in their area of interest. Research project grants awarded to institutions on behalf of a principal investigator support medical research activities in the areas of both the specific interests and competence of the principal investigators and in areas identified as high priority by the NIH Institutes and Centers (ICs).

NIH uses several RPG activities to support the best research applications from the most talented researchers. The most common, the traditional R01 grant, accounts for 73 percent of the RPGs awarded and approximately 67 percent of competing RPG funding. The R01 supports a single project with a principal investigator or co-investigators. Another frequently used grant is the P01, a multi-project grant, which supports a variety of broad-based multi-disciplinary projects conducted by numerous investigators working on various aspects of a specific major research objective or theme.

Budget Policy: The FY 2014 President's Budget estimate for this high priority mechanism is \$16.932 billion, or a 2.3 percent increase over the FY 2012 Actual level. This level of support enables NIH to increase the pace and scope of ongoing research, as well as stimulate participation of new researchers and the accompanying development of fresh ideas. To maximize the number of new and competing grants, in FY 2012 inflationary increases for future year commitments were discontinued for all competing and non-competing awards, however adjustments for special needs (such as equipment and added personnel) will continue to be accommodated. The average cost of new and competing RPGs is estimated to increase by over 8.0 percent compared to FY 2012. However, this is due to about 100 very large new grants expected in FY 2014; without those outliers the average cost is only slightly higher than FY 2012. The Budget is estimated to fund a total of 36,610 RPGs, an increase of 351, or one percent, from the FY 2012 Actual grants. Of total funding, \$4.685 billion would be for an

⁵ All referenced amounts reflect adjustments for comparability to FY 2014 for the proposed direct funding of the National Center for Biotechnology Information / Public Access in the National Library of Medicine.

estimated 10,269 new and competing RPGs, an increase of 1,283 over the 8,986 new and competing RPGs awarded in FY 2012. This represents a 14.3 percent increase, or an additional \$902.9 million. Administrative Supplements would receive approximately \$146.8 million in FY 2014, a decrease of \$44.8 million compared to the \$191.6 million in FY 2012. NIH will also maintain its strong commitment to extramural grants targeted to small business innovative and technology transfer research (SBIR/STTR) programs. SBIR/STTR grants would receive \$735.1 million to support an estimated 1,775 awards, a \$66.8 million increase, or 10.0 percent, compared to the \$668.3 million awarded in FY 2012 – meeting the increased minimum set-aside thresholds established under the SBIR/STTR Reauthorization Act of 2011.

Research Centers: Research center grants are awarded to institutions on behalf of a program director and a group of collaborating investigators to: (a) provide long-term support for leading-edge research; (b) conduct multi-disciplinary programs of biomedical research; and (c) develop research resources. The Research Centers program aims to integrate basic research with applied research and transfer activities; to promote research in the areas of clinical applications with an emphasis on intervention, including prototype development and refinement of products, techniques, processes, methods, and practices; to develop and maintain the biotechnology and research model resources needed by NIH-supported biomedical investigators for conducting research; and, to assist minority institutions in improving their research infrastructure.

Budget Policy: NIH estimates a decreased level of support for Research Centers in FY 2014; at \$2.846 billion this represents a \$194.5 million decrease, or 6.4 percent, below the FY 2012 Actual level. This level would fund an estimated 1,380 awards, or 73 fewer grants than the 1,453 made in FY 2012. The reduced funding of the mechanism stems from a variety of program adjustments. The planned decrease in the number and amount of support provided by the OD Common Fund within the Protein Capture, Human Microbiome, Molecular Libraries, and Bioinformatics and Computational Biology programs between FY 2012 and FY 2014 accounts for \$51.3 million of the decrease. Also, NIAID realigned approximately \$67.9 million within its biodefense and emerging infectious diseases research portfolio from Research Centers to RPGs to establish multi-project translational research centers.

Other Research: NIH continues to support a variety of investigator-initiated activities through other types of research grants. Through the Research Careers program, NIH provides increased career opportunities in medical research to scientists of superior potential. The program provides support for young investigators who desire advanced development and scientists who need experience to qualify for senior positions. Other Research mechanisms include support for research initiatives in the cooperative clinical research sub-mechanism to encourage regionally-based clinical evaluations of methods of therapy and prevention strategies. Minority Biomedical Research Support Grants fund research that enriches the biomedical research environment at undergraduate institutions. Moreover, these grants strengthen the research training capabilities of minority faculty and students. Other Research grants also support grants for: shared resources for grantee institutions; purchase of equipment; implementation of the Nanotechnology program of the Common Fund; and conference grants to support investigator-initiated meetings, conferences or workshops to promote sharing of scientific knowledge and address specific issues.

Budget Policy: The \$1.866 billion estimated for this mechanism reflects an increase of \$58.2 million, or 3.2 percent, relative to the FY 2012 Actual level. That amount would fund a total of 6,549 grants, an increase of 53 awards or one percent over the FY 2012 Actual level. The primary drivers for the increase are an additional \$32.3 million for OD Common Fund support of new projects related to the NIH workforce diversity initiative and approximately \$16.6 million for expanded Cures Acceleration Network (CAN) projects funded by NCATS.

Research Training: The purpose of the Ruth L. Kirschstein National Research Service Awards (NRSA) program is to strengthen the Nation's corps of biomedical and behavioral research investigators. Through institutional awards and individual fellowships, NIH supports both basic and applied research training in the biomedical and behavioral sciences. Institutional awards provide the foundation for the manpower development effort by supporting the national capacity for excellent, up-to-date training in a variety of institutional settings. They enable NIH to aid institutions in maintaining vigorous and effective research training programs and, in particular, to support research training programs in areas of national need. Funds are awarded for predoctoral and postdoctoral stipends and for tuition where warranted, with a modest allocation to the institution to defray training-related expenses not covered by tuition. NRSA's also include funds for travel, fees, indirect costs, and other expenses. Stipend levels constitute the largest portion of NRSA funding.

Budget Policy: NIH proposes an average stipend increase of approximately 2.7 percent above the FY 2012 level for trainees. The NRSA training program budget reflects a stipend increase to \$42,000 for the entry level postdoctoral trainees and fellows, along with 4% increases for each subsequent level of experience. Stipend rates for pre-doctoral trainees and fellows would receive a 2 percent increase. These increases are consistent with stipend modifications recommended by the Advisory Committee to the NIH Director as well as recommendations included in a major training research study issued in 2011 by the National Research Council of the National Academy of Sciences.⁶ In addition, this increase is consistent with 42 USC 288(b)(5), which anticipates periodic adjustments in stipends "to reflect increases in the cost of living." Stipend rate adjustments continue a long-term strategy that NIH has used to more closely align stipend levels to salaries that could be earned in related occupations. The proposed stipend increase is intended to improve NIH's ability to attract high-quality research investigators to the field of biomedical research. In order to achieve NIH's research objectives, it is essential to ensure that highly trained scientists will be available to address the Nation's biomedical, behavioral and clinical research needs. NIH estimates \$776 million for this mechanism in FY 2014, a \$14 million, or 1.8 percent, increase above the FY 2012 Actual level. That amount would support an estimated 16,197 total Full-Time Training Positions (FTTPs), 108 less than the 16,305 total FTTP funded by the FY 2012 Actual level.

⁶ *National Research Council, Research Training in the Biomedical, Behavioral, and Clinical Research Sciences*, (Washington, DC, The National Academies Press, 2011)
(http://grants.nih.gov/training/Research_Training_Biomedical.pdf)

Research and Development (R&D) Contracts: NIH awards R&D contracts to acquire specific products, services or studies from academic institutions and nonprofit and commercial organizations. This mechanism also includes collaborative research efforts with other agencies, small business innovation research and architect-engineering services contracts.

Budget Policy: FY 2014 funding for R&D Contracts would increase by \$118.9 million to \$3.030 billion, an increase of 4.1 percent above the FY 2012 Actual level of \$2.911 billion. The estimated amount would fund about 2,492 contract awards, the same level as funded in FY 2012.

Intramural Research: Through the Intramural Research Program (IRP), NIH conducts basic and clinical research at its on-campus research facilities in Bethesda, Maryland, and at off-campus locations such as the Gerontology Research Center in Baltimore, Maryland; Research Triangle Park, North Carolina; the Rocky Mountain Laboratories in Hamilton, Montana and Phoenix, Arizona. Fundamental research performed by intramural scientists provides the basis upon which advances in medical and dental care are built. An important byproduct of this research productivity is the cadre of young physicians and basic scientists who are trained in the techniques and approaches of intramural scientists. Many of these young researchers become extramural and intramural investigators. A valuable and unique feature of the NIH IRP is the Clinical Research Center, a 240-bed research hospital on the NIH campus. This world-class national resource promotes translational research -- that is, the transference of scientific laboratory research into applications that benefit patient health and medical care. The "bench-to-bedside" approach adopted in 1953 locates patient care units in close proximity to cutting-edge laboratories conducting related research, which facilitates interaction and collaboration among clinicians and researchers. Most importantly, patients and their families at the Clinical Center benefit from the signature elements of NIH (i.e. cutting-edge technologies, research programs, and compassionate care).

The IRP supports vital research being conducted at NIH by some of this Nation's top scientists. This powerful network of investigators is an integral part of the greater national research network devoted to advancing the knowledge needed to develop treatments, tests, and prevention strategies to benefit the public as quickly as possible. A strong intramural program at NIH complements and reinforces the work being carried out in the extramural biomedical research community.

Budget Policy: This mechanism is estimated at \$3.495 billion, a \$66.2 million, or 1.9 percent, increase above the FY 2012 Actual level. This level covers a projected 1.0 percent increase for full-time equivalent (FTE) payroll attributable to annualization of the planned March 2013 pay raise of 0.5 percent and the proposed January 2014 pay raise of 1.0 percent for civilian employees.

Research Management and Support (RMS): This mechanism supports many functions, including: scientific direction and management by NIH staff in the review, award, and performance monitoring of extramural awards (research grants, training awards, and research and development contracts); administrative and technical support for Congressionally-mandated review groups and advisory councils; liaison among NIH and Departmental components, as well

as among applicants, grantees, advisory bodies, and special interest organizations; and monitoring of advances emerging from basic science laboratories to determine possible clinical applications for treatment and prevention. Management and administrative functions for each IC are also supported by this mechanism. Examples of such functions include: interpreting, analyzing, and implementing new legislation and administrative orders; formulating and executing IC budgets; performing management evaluation studies; determining manpower requirements; assessing the condition of both NIH and extramural grantee laboratory facilities and equipment; supporting prevention and education activities, including development of educational and informational materials for both the medical community and the general public; and providing the leadership and business functions for the ICs.

Budget Policy: RMS is estimated at \$1.550 billion, an increase of \$19.5 million or 1.3 percent above the FY 2012 Actual level. The estimated amount partially absorbs inflation in non-pay expenses but accommodates the projected 1.0 percent FTE payroll cost increase attributable to annualization of the planned civilian March 2013 pay raise of 0.5 percent and the proposed civilian January 2014 pay raise of 1.0 percent.

Another change, beginning in FY 2013, is a budget-neutral shift of FTE from reimbursable to direct. This is due to the effect of transferring positions previously funded through the Management Fund (Division of Extramural Activities Support, or DEAS) to individual ICs as of year-end FY 2012. As a result of the DEAS transfer, estimated direct salaries and benefits for FY 2014 are proportionately higher than those identified for FY 2012 and previous years.

Office of the Director: The Office of the Director (OD) provides leadership, coordination, and guidance in the formulation of policy and procedures related to biomedical research and research training programs. To provide this direction, the OD centrally coordinates NIH's extramural and intramural research activities; science policy and related social, ethical, and legal issues; technology transfer and intellectual property protection policies; health information dissemination and public education functions; legislative activities; and, oversight of the agency's stewardship of public funds.

OD encourages and fosters cross-Institute NIH research and research training efforts in the prevention and treatment of disease through program coordination offices that complement the efforts of the ICs. These offices focus on Acquired Immune Deficiency Syndrome (AIDS); women's health; disease prevention; science education; dietary supplements; rare diseases and disorders; and behavioral and social sciences research. While OD provides the overall direction, coordination and oversight of these programs, the ICs manage the actual research operations.

The OD request also includes the NIH Common Fund that supports cross-cutting, trans-NIH programs that require participation by at least two NIH ICs. The requirements for the Common Fund encourage collaboration across the ICs, while providing NIH with flexibility to determine priorities for Common Fund support.

Budget Policy: The FY 2014 request of \$1.473 billion reflects an increase of \$16.2 million, or 1.1 percent, over the FY 2012 Actual level. The Office of Research Infrastructure Programs would also receive an additional \$3.1 million. The OD Common Fund would receive an increase

of \$28.0 million above the FY 2012 Actual level, a 5.1 percent increase to focus primarily on training of talented, new investigators. A total of \$165.0 million would be provided for the National Children's Study, which is \$28.1 million less than the \$193.1 million allocated for FY 2012.

Buildings and Facilities: The buildings and facilities (B&F) program is responsible for the design, construction, improvement, and major repair of clinical and laboratory buildings and supporting facilities essential to NIH's research mission. This account has two major elements: the design and construction of new facilities for NIH research programs and the continuing repair and improvement of existing facilities.

Budget Policy: This request would provide \$126.1 million for B&F – \$0.8 million above the FY 2012 Actual level. In addition to this is the \$7.9 million budgeted in the National Cancer Institute in construction funds required for facilities repairs and improvements at the National Cancer Institute—Frederick Federally Funded Research and Development Center in Frederick, Maryland. The requested amount allows NIH to continue to support the Administration's commitment to reducing water use and greenhouse gas emissions, improving building energy efficiency, and substituting renewable resources for fossil fuels in transportation assets. NIH intends to devote \$75 million of its FY 2014 B&F request to as a one-time expense to add three new water chillers on the Bethesda campus in order to improve the capacity and reliability of this critical campus-wide utility for cooling.

Explanation - Other Activities

Type 1 Diabetes: A special program for research on Type 1 Diabetes was established by law in 1998 and is supported through a mandatory appropriation.

Budget Policy: The FY 2014 request includes \$150.0 million for these activities, which is equal to the FY 2012 level.

Superfund: NIH's contribution to the Superfund Program is to improve human health by addressing and preventing diseases and injuries associated with environmental contaminants. The Superfund Research Program (SRP) and the Worker Training Program (WTP) complement each other to create effective community and workplace public health interventions aimed at preventing harmful exposures.

Budget Policy: The FY 2014 request of \$79.4 million represents a \$0.5 million, or 0.6 percent, increase above the FY 2012 Actual level.

**National Institutes of Health
FY 2014 Congressional Justification**

**Key Outputs and Outcomes Tables
(NIH)**

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
SRO-1.4 By 2012, identify signatures of gene expression in peripheral tissues that are associated with alcohol-induced disorders. (Outcome)	<p>FY 2012: NIH-supported researchers determined that a genetic variant that is associated with alcohol and other drug dependence results in reduced expression of the gene in lymphoblastoid cells. In a separate study, changes in DNA methylation were associated with alcohol dependence using peripheral blood samples from alcohol dependent cases and healthy controls.</p> <p>Target: Complete gene expression studies with peripheral tissues and identify signature gene expression profiles.</p> <p>(Target Met)</p>			N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
SRO-1.6 (RA) By 2012, present preliminary findings from the three-pronged approach to curtail the HIV pandemic. (Outcome)	<p>FY 2012: PrEP was shown to be effective in preventing HIV infection and Truvada has been approved as the first drug for PrEP. TLC-Plus is enrolling candidates in a clinical trial and progress has been made in basic research to eliminate HIV reservoirs.</p> <p>Target: Present preliminary findings from the three-pronged approach to curtail the HIV pandemic, which includes Test, Link to Care, Plus Treat (TLC-Plus) and Pre-Exposure Prophylaxis (PrEP) studies, and basic research to eliminate HIV reservoirs. (Target Met)</p>			N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
SRO-1.7 (RA) By 2012, incorporate scientific human development concepts, in order to develop and rigorously test at least 2 childhood learning approaches that can be integrated into science, technology, engineering and mathematics (STEM) K-12 educational programs. (Outcome)	<p>FY 2012: Preliminary study analyses suggest that math abilities may improve by using either an after-school program focused on fine motor skills and executive function skills, or a program using schema-based instruction.</p> <p>Target: Complete testing of at least 2 childhood learning approaches for integration into science, technology, engineering and mathematics (STEM) K-12 educational programs.</p> <p>(Target Met)</p>			N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
<p>SRO-1.8 (RA) By 2012, identify three research findings that will advance understanding of the biological basis underlying the heterogeneity of autism spectrum disorder (ASD) and conduct initial testing of three treatment or service delivery strategies. (Outcome)</p>	<p>FY 2012: Researchers identified specific genes closely associated with ASD and genetic mutations in older fathers that contribute to heterogeneity in ASD phenotypes. Testing was completed on three approaches to improve social skills and job-related skills of individuals with ASD, and to assess the impact of family finances on ASD service delivery strategies.</p> <p>Target: Build upon research findings to advance understanding of the biological basis underlying the heterogeneity of autism spectrum disorder (ASD) and complete initial testing of three treatment or service delivery strategies.</p> <p>(Target Met)</p>			N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
SRO-2.1 By 2015, evaluate islet transplantation in combination with immune modulation strategies for the treatment of type 1 diabetes in clinical trials. (Outcome)	<p>FY 2012: The FY 2012 primary endpoint data collection has been completed for all study subjects.</p> <p>Target: Complete data collection for Phase II studies.</p> <p>(Target Met)</p>	Complete enrollment in CIT-07 (Phase III trial); continue to enroll in CIT-06 (Phase III trial).	Perform the primary endpoint analysis in CIT-07, which is a clinical trial of islet transplantation (alone) in Type 1 diabetes.	N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
<p>SRO-2.8 By 2013, advance two emerging new strategies for treating muscular dystrophy to the point of preparedness for clinical trials. (Outcome)</p>	<p>FY 2012: Antisense oligonucleotide (AONs) effectively skip regions of the dystrophin gene that contain muscular dystrophy -causing mutations. Strategies for applying AON technology to a wide cohort of muscular dystrophy patients with various mutations have been tested in animal models.</p> <p>Target: Test an antisense oligonucleotide-based therapeutic strategy that could be applicable to multiple MD-causing mutations that require exon skipping.</p> <p>(Target Met)</p>	<p>Advance two emerging new strategies for treating muscular dystrophy to the point of preparedness for clinical trials.</p> <p>Test two new strategies for treating muscular dystrophy in preclinical models.</p>		<p>N/A</p>

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
SRO-2.9 By 2015, advance understanding of social determinants of health and health disparities using multilevel, transdisciplinary team science approaches by developing intervention models of how various factors affect individual health outcomes and their distribution in populations. (Outcome)	FY 2012: NIH built 10 teams of transdisciplinary scientists at Centers for Population Health and Health Disparities. Target: Build teams of transdisciplinary scientists, including those newly trained, to conduct cross-center analysis to understand and address health inequities. (Target Met)	Develop interventions directed at more than two factors (such as both individual level and social context) and more than just individual behavior change.	Test interventions at various levels to establish optimal strategies for reducing health disparities/inequities.	N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
SRO-2.10 By 2014, identify three clinical candidate compounds for rare or neglected diseases. (Outcome)	<p>FY 2012: Pilot projects were begun on lead compounds for five rare or neglected diseases to further study and assess their utility as potential therapeutics. Pre-clinical studies were conducted on all five selected lead compounds.</p> <p>Target: Begin pilot projects on the selected rare disease lead compound series to assess their capabilities as potential therapeutics.</p> <p>(Target Met)</p>	<p>Conduct safety and efficacy tests such as medicinal chemistry optimization, pharmacokinetics, pharmacodynamics, efficacy, stability, toxicity, and other related studies on promising compounds in conjunction with the initiation of regulatory efforts on the selected rare and neglected disease lead compound series.</p>	<p>Conclude preclinical safety and efficacy tests and initiate early stage clinical testing in conjunction with regulatory efforts on the selected rare and neglected disease lead compound series</p>	N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
<p>SRO-2.11 By 2016, conduct studies of young children to determine whether the plant estrogens in soy formula produce hormone-like effects. (Outcome)</p>	<p>FY 2012: Researchers enrolled 156 mothers and infant pairs prenatally or at birth. They completed 52 prenatal visits, 153 birth visits and 135 2-week visits. They also enrolled 196 Toddlers and completed their one year evaluations.</p> <p>Target: Enroll an additional 112 mothers prenatally or at birth. Complete 70 prenatal visits, 80 birth visits and 80 2-week examinations. Enroll 200 Toddlers and complete their one year evaluations.</p> <p>(Target Not Met)</p>	<p>Complete 100 Infant Phase study visits.</p>	<p>Complete 20 Infant Phase study visits</p>	<p>N/A</p>

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
SRO-3.1 By 2013, identify at least one clinical intervention that will delay the progression, delay the onset, or prevent Alzheimer's disease (AD). (Outcome)	<p>FY 2012: Baseline imaging studies on participants in an ongoing Phase III clinical trial of intravenous immunoglobulin (IVIg) were completed.</p> <p>Target: Complete baseline imaging studies to facilitate analysis of the effects of IVIg on relevant biomarkers of AD.</p> <p>(Target Met)</p>	Complete treatment phase for the IVIg study and analyze data.		N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
<p>SRO-3.3 By 2012, determine the efficacy of using salivary diagnostics to monitor health and diagnose at least one systemic disease. (Outcome)</p>	<p>FY 2012: The clinical study of biomarkers for head and neck squamous cell cancer enrolled 395 persons (226 cancer, 169 control) and identified specific mRNA and protein markers that discriminated cancer from control samples. The clinical study of primary Sjogren's syndrome resulted in the discovery and pre-clinical validation of a panel of proteomic salivary biomarkers.</p> <p>Target: Begin the data collection phase of clinical trials in Sjogren's syndrome and head and neck cancers so that diagnostic and therapeutic applications can be developed. (Target Met)</p>			N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
<p>SRO-3.4 By 2015, evaluate an HIV vaccine candidate in a test of concept (phase IIB) efficacy trial in order to move towards an HIV/AIDS vaccine. (Outcome)</p>	<p>FY 2012: Researchers developed two mucosal non-human primate transmission models using repeat low-dose exposure demonstrating the value of models in determining the potential effectiveness of an HIV vaccine candidate.</p> <p>Target: Develop one or more alternative macaque models that more accurately reflect human exposure and that can be used to determine the ability of candidate vaccines to provide protection against challenge viruses that are genetically distinct from the vaccine (i.e., a heterologous challenge).</p> <p>(Target Met)</p>	<p>Advance at least one promising candidate vaccine so that it is ready to move forward into a phase II trial. Previous target: Advance at least one promising candidate vaccine into a phase II trial.</p>	<p>Initiate the early phase testing needed to advance a promising candidate vaccine into efficacy testing.</p>	<p>N/A</p>

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
SRO-3.5 By 2013, identify and characterize at least two human candidate genes that have been shown to influence risk for substance use disorders and risk for psychiatric disorders using high-risk family, twin, and special population studies. (Outcome)	<p>FY 2012: The genetic association of ADH1-Arg48His with reduced risk for alcohol dependence in East Asian populations was replicated in European Americans and African Americans. The association was extended to reduced alcohol consumption in both populations.</p> <p>Target: Initiate replication and refinement of genome wide association and functional analysis data.</p> <p>(Target Met)</p>	Complete genome wide association and functional studies and identify potential genomic variants associated with risk for substance use and/or psychiatric disorders.		N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
<p>SRO-3.6 By 2012, develop and apply clinically one new imaging technique to enable tracking the mobility of stem cells within cardiovascular tissues. (Outcome and Efficiency)</p>	<p>FY 2012: Investigators encapsulated mesenchymal stem cells in radiopaque alginate microcapsules, which had two important functions--the capsules facilitated visualization of the exact location of the cells using a clinical angiography system, and the capsules provided a semi-permeable membrane that protected the cells while permitting diffusion of cytokines and growth factors from the cells into the host vascular bed.</p> <p>Target: Develop and apply clinically one new imaging technique to enable tracking the mobility of stem cells within cardiovascular tissues.</p> <p>(Target Met)</p>			N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
SRO-3.7 By 2019, develop at least two novel therapies for immune-mediated disease. (Outcome)	<p>FY 2012: Completed analysis of patient samples from the study of rabbit and horse ATG in the treatment of severe aplastic anemia using flow cytometry and protein chemistry.</p> <p>Target: Complete data analysis of the study of rabbit and horse ATG in the treatment of severe aplastic anemia and publish results.</p> <p>(Target Met)</p>	Conduct long-term follow-up of patients in the study of rabbit and horse ATG in the treatment of severe aplastic anemia, and conduct laboratory experiments to explore in greater detail pre- and post-therapy samples.	Begin patient enrollment in a clinical trial for Behcet's disease.	N/A
SRO-3.8 By 2017, determine the optimal tailored treatment regimen for patients with early stage breast cancer that maximizes the benefits of chemotherapy while minimizing the side-effects of unnecessary treatment. (Outcome)	<p>FY 2012: Central scoring of 34% of the hormone receptor testing was completed in FY 2012.</p> <p>Target: Complete hormone receptor scoring for 30% of all cases.</p> <p>(Target Met)</p>	Complete hormone receptor scoring for 60% of all cases.	Complete hormone receptor scoring for 90% of all cases.	N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
SRO-3.9 By 2020, identify two molecular-targeted therapies for disorders of the immune system in children. (Outcome)	<p>FY 2012: A genome-wide association study has been performed on the cohort of 982 systemic-onset juvenile idiopathic arthritis patients and over 7000 healthy controls for 1.4 million genetic markers.</p> <p>Target: Complete genetic, biochemical, or cellular studies aimed at identifying a molecular pathway underlying the disease in the patient cohort.</p> <p>(Target Met)</p>	Identify at least one molecular pathway suitable for targeting in the patient cohort by performing detailed genetic mapping and confirmatory analyses for markers and pathways identified through genome-wide association.	Design a clinical trial testing an agent for systemic-onset juvenile idiopathic arthritis (Still's disease).	N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
SRO-3.10 By 2017, advance two candidate medications for treatment of substance use disorders to clinical studies in humans. (Outcome)	<p>FY 2012: NIH-supported researchers conducted two proof-of-concept trials to test the efficacy of quetiapine and levetiracetam in reducing heavy drinking in alcohol dependent individuals which resulted in ineffective medications for the participants tested.</p> <p>Target: Test one compound in proof-of-concept trials.</p> <p>(Target Met)</p>	Conduct pharmacogenetic studies to identify genetic variations that influence treatment response to one compound.	Complete phase 2 clinical studies on one compound.	N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
SRO-3.11 By 2015, advance the discovery of high need cures through the development of novel compounds, the repurposing of abandoned products, and innovations in the therapeutics discovery and development process. (Outcome)	<p>FY 2012: CAN was operationalized by establishing the CAN Review Board, having IOM host a CAN workshop, exploring the flexible research authority, and launching a CAN-related initiative involving new partnerships, including FDA.</p> <p>Target: Establish mechanisms to operationalize the Cures Acceleration Network.</p> <p>(Target Met)</p>	Initiate research on the therapeutics discovery and development process and "high need cures" projects.	Achieve progress towards early milestones for three collaborative "high need cures" projects.	N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
<p>SRO-4.6 (RA) By 2012, develop a technology to facilitate patient-controlled, secure image sharing between medical centers and at least one clinic operating in an underserved community. (Outcome)</p>	<p>FY 2012: A needs analysis survey among patients, primary care providers, and specialists was conducted. Based on this needs assessment a prototype of an image sharing framework was developed that allows prior imaging data to be shared among unaffiliated healthcare facilities where patients have full control of health data and the image sharing process.</p> <p>Target: Complete need analysis surveys in underserved areas and based on these identified needs develop at least one feasibility test of technology to facilitate patient-controlled, secure image sharing between medical centers and a clinic operating in an underserved community.</p> <p>(Target Met)</p>			N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
SRO-4.11 (RA) By 2012, analyze oral cancer genomes using high throughput methods to develop a blueprint of genetic alterations. (Outcome)	<p>FY 2012: 129 pairs (258 individual samples) of tumor samples matched with normal samples were analyzed.</p> <p>Target: Analyze and annotate the genome sequences of 94 samples taken from oral and tongue cancers and compare with matched normal human tissue (total of 188 samples).</p> <p>(Target Met)</p>			N/A
SRO-5.8 By 2012, improve device(s) to measure hot flashes and test in clinical studies of hot flash therapies. (Outcome)	<p>FY 2012: Postmenopausal women who underwent clinical hypnosis displayed 57% reductions in hot flashes compared to 10% reduction from the control group as measured by a hot flash monitor.</p> <p>Target: Device to measure hot flashes developed and tested in clinical studies is improved compared to other devices.</p> <p>(Target Met)</p>			N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
<p>SRO-5.11 By 2012, develop and test at least two behavioral strategies for the management of symptoms to reduce the effects of disease, disability, or psychological distress on quality of life and outcomes. (Outcome)</p>	<p>FY 2012: One strategy tested the efficacy of two different 12-month dyspnea self-management programs compared to usual health education. A second strategy compared two interventions for abdominal pain management in the emergency department.</p> <p>Target: Test at least two behavior-based strategies that manage at least one candidate symptom and improve quality of life and health outcomes.</p> <p>(Target Met)</p>			N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
SRO-5.12 By 2013, identify several potential targets and/or molecules that modulate or enhance the extinction of learned behaviors and conditioned associations supporting addiction, compulsion, or anxiety disorders. (Outcome)	<p>FY 2012: Experiments have established the efficacy of several compounds (e.g., baclofen, atomoxetine, the GlyT1 inhibitor RO4543338) in enhancing extinction of drug seeking behavior in animal models. Earlier results have been replicated and new compounds are also proving efficacious.</p> <p>Target: Test one additional compound in animal models of extinction of drug seeking behavior and confirm in replication studies the effectiveness of compounds reported to date.</p> <p>(Target Met)</p>	Test whether compounds that have been shown to affect the extinction of drug seeking behavior for some drugs of abuse are equally effective against other drugs of abuse.		N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
SRO-5.13 By 2015, establish and evaluate a process to prioritize compounds that have not yet been adequately tested for more in-depth toxicological evaluation. (Outcome)	<p>FY 2012: The library containing 10,000 compounds was screened in 65 quantitative high throughput screens (qHTS) or assays. Fifty compounds were screened in approximately 600 mid-throughput assays.</p> <p>Target: Test 10,000 compound main library in 50 qHTS and test 50 compounds in mid-throughput assays.</p> <p>(Target Met)</p>	Test 10,000 compound main library in 25 qHTS and test 180 compounds in densely sequenced human lymphoblastoid cell lines to assess genetic diversity in response to toxicants.	Test 10,000 compound main library in an additional 25 qHTS and test 30 subsets of possible high risk chemicals in high-content screens.	N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
SRO-5.14 By 2013, reduce tobacco prevalence among youth by preventing initiation and increasing rates of cessation. (Outcome)	<p>FY 2012: NIH conducted research on the implementation of evidence-based behavioral cessation programs in emergency rooms and within the VA system, as well as culturally appropriate treatment for American Indians and Alaska Natives.</p> <p>Target: Based on results of preliminary analysis, conduct research on the implementation of evidence-based behavioral cessation programs, and continue to assess the efficacy of cessation medicines in low income youth and adult populations.</p> <p>(Target Met)</p>	Identify best evidence-based strategies to reduce tobacco prevalence among youth by preventing initiation and increasing rates of cessation.		N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
SRO-6.1 By 2012, identify the genes that control the risk of development of age-related macular degeneration (AMD) and glaucoma in humans. (Outcome)	<p>FY 2012: GWAS identified CFH, LIPC, CETP, ABCA1 and LPL genes play significant role in AMD, pointing to new molecular mechanisms (eg., complement and cholesterol pathways) and drug targets. POAG GWAS identified CDKN2BAS and SIX1/SIX6 genes and linked the TGFβ pathway to optic nerve degeneration.</p> <p>Target: Complete goal of identifying the genes that control the risk of development of age-related macular degeneration (AMD) and glaucoma in humans.</p> <p>(Target Met)</p>			N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
SRO-6.4 By 2015, identify and characterize two molecular pathways of potential clinical significance that may serve as the basis for discovering new medications for preventing and treating asthma exacerbations. (Outcome)	<p>FY 2012: Researchers investigated two proteins associated with mucus formation, CLCA1 and TMEM16A, that may serve as potential targets for treating asthma.</p> <p>Target: Investigate the role of mucus gel formation in healthy controls and asthma patients.</p> <p>(Target Met)</p>	Conduct investigations to elucidate the dynamic, pathophysiologic phenotypes of severe asthma.	Investigate the disease processes involved in asthma exacerbations and/or severe asthma using state-of-the-art pulmonary imaging techniques.	N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
<p>SRO-6.5 By 2014, develop and evaluate two new interventions for the prevention and/or treatment of HIV disease utilizing the newly restructured HIV/AIDS clinical trials networks. (Outcome)</p>	<p>FY 2012: Enrollment was completed for a study to test three different sets of HIV medications for HIV infected people who have never taken HIV medications.</p> <p>Target: Complete enrollment into a comparative study of three non-nucleoside reverse transcriptase inhibitor (NNRTI)-sparing antiretroviral regimens for treatment-naïve HIV-1-infected individuals.</p> <p>(Target Met)</p>	<p>Complete the first study to compare the safety, acceptability and efficacy of oral pre-exposure prophylaxis (PrEP) and topical microbicides for prevention of sexual transmission of HIV in women.</p>	<p>Evaluate non-tenofovir based strategies for HIV pre-exposure prophylaxis (PrEP) in men who have sex with men and women who are at increased risk of HIV infection in the U.S. In addition, complete an evaluation of a comprehensive test, link, and care "plus" strategy for HIV prevention in New York City, Washington, DC, and four comparator cities in the U.S.</p>	<p>N/A</p>

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
<p>SRO-6.6 By 2015, provide at least one new or significantly improved minimally-invasive treatment for clinical use in patients using image-guided interventions. (Outcome)</p>	<p>FY 2012: Clinical studies began on image guided interventions that provide real-time, enhanced diagnostic and treatment applications that have the potential to see if damaged tissue has been removed successfully, identify cancerous lesions, and determine if cancer has spread to lymph nodes.</p> <p>Target: Support clinical studies in at least one IGI system.</p> <p>(Target Met)</p>	<p>Conduct one additional feasibility study on new IGI technologies for the diagnosis of lymph node cancer, treatment of skin cancer, and treatment of cardiac arrhythmias.</p>	<p>Identify how the use of a new or emerging IGI technology affects physician performance, or what physician training is necessary.</p>	<p>N/A</p>

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
SRO-7.11 (RA) By 2013, gather sufficient data to support the development of a national standard for normal fetal growth. (Outcome)	<p>FY 2012: Conducted recruitment outreach activities and reached 90% of the recruitment target. A new data management structure is now accepting imaging data.</p> <p>Target: Conduct outreach activities and complete a web-based data management structure for ultrasound images, to better manage the volume of the ultrasound images.</p> <p>(Target Met)</p>	Complete data collection to support the development of a national standard for normal fetal growth.		N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
SRO-8.6 By 2011, develop stable national estimates of vision impairment by extending the vision component of the National Health and Nutrition Examination Survey (NHANES). (Outcome)	<p>FY 2011: Stable estimates of visual impairment due to uncorrected refractive errors are available on a federal website and form the baseline for the goal on uncorrected refractive error in Healthy People 2020.</p> <p>Target: Report stable national estimates of vision impairment by extending the vision component of the National Health and Nutrition Examination Survey (NHANES).</p> <p>(Target Met)</p>			N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
<p>SRO-8.7 By 2015, identify three (3) key factors influencing the scaling up of research-tested interventions across large networks of services systems such as primary care, specialty care and community practice. (Outcome)</p>	<p>FY 2012: NIH identified three approaches that enhance the uptake of research-tested interventions in service delivery systems addressing child mental health, attention deficit hyperactivity disorder, and depression.</p> <p>Target: Complete target by identifying three effective implementation strategies that enhance the uptake of research-tested interventions in service systems such as primary care, specialty care and community practice.</p> <p>(Target Met)</p>	<p>Identify three key factors influencing the sustainability of research-tested interventions in service systems such as primary care, specialty care, and community practice.</p>	<p>Identify three effective implementation strategies that enhance the sustainability of research-tested interventions in service systems such as primary care, specialty care and community practice.</p>	<p>N/A</p>

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
<p>SRO-8.9 By 2014, identify 12 pathogen and/or host factors critical for understanding the molecular and cellular basis of pathogenesis of Category A-C biodefense pathogens and/or pathogens causing emerging infectious diseases. (Outcome)</p>	<p>FY 2012: Twenty pathogens and/or host factors, including those that cause: malaria, influenza, Ebola, Marburg, and hepatitis C were identified that are critical for understanding pathogenesis and show promise for the development of new therapeutics.</p> <p>Target: Identify three pathogen and/or host factors.</p> <p>(Target Exceeded)</p>	<p>Identify three pathogens and/or host factors.</p>	<p>Identify four pathogen and/or host factors.</p>	<p>N/A</p>

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
SRO-9.2 By 2018, identify culturally appropriate, effective stroke prevention/intervention programs in minority communities. (Outcome and Efficiency)	<p>FY 2012: Completed enrollment of 230 subjects, 100% of the target for testing an intervention in a secondary stroke prevention program in an underserved, African American community in Washington, DC.</p> <p>Target: Complete 75% of patient recruitment for testing an educational intervention and a secondary stroke prevention program in underserved, African American, urban communities.</p> <p>(Target Met)</p>	Complete testing of a culturally tailored intervention to improve stroke awareness and time to hospital arrival in order to increase utilization of tissue plasminogen activator (tPA) treatment in minority populations.	Develop a protocol for testing a new prevention and/or intervention program that aims to reduce a major cause of disparities in stroke in minority communities.	N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
SRO-9.4 By 2013, develop and evaluate the efficacy of neonatal screening for congenital cytomegalovirus (CMV) infection to permit identification of infants who will develop CMV-induced hearing loss in the first years of life. (Outcome)	<p>FY 2012: Hearing tests revealed that 389 children not showing any symptoms for CMV infection at birth were actually infected with CMV. Hearing loss was detected in 4.7% of these infants, but did not differ by race or ethnicity.</p> <p>Target: Begin hearing testing on asymptomatic children who test positive for CMV infection.</p> <p>(Target Met)</p>	Evaluate the efficacy of proposed neonatal screens to identify CMV-infected infants who will develop hearing loss in the first years of life.		N/A
SRO-9.5 By 2015, assess the efficacy of long-term oxygen treatment in patients with COPD and moderate hypoxemia. (Outcome)	<p>FY 2012: The trial has enrolled 510 patients, and is on track to meet the revised recruitment target of 737 subjects.</p> <p>Target: Continue recruitment to 808 subjects.</p> <p>Previous target: Continue recruitment to 899 subjects.</p> <p>(Target Not Met)</p>	Continue recruitment to 626 subjects. Previous target: Continue recruitment to 1134 subjects.	Complete recruitment (737 total subjects).	N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
CBRR-1.1 Provide research training for predoctoral trainees and fellows that promotes greater retention and long-term success in research careers. (Output)	FY 2012: Award rate to comparison group reached 11%. Target: $N \geq 12\%$ (Target Not Met)	N > 10%	N > 10%	N/A
CBRR-1.2 Provide research training for postdoctoral fellows that promotes greater retention and long-term success in research careers. (Output)	FY 2012: Award rate to comparison group reached 13% and exceeded the target by 1%. Target: $N \geq 12\%$ (Target Met)	N > 10%	N > 10%	N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
<p>CBRR-2 Promote data sharing and provide information in real time through the NIH Business System (NBS) by developing, integrating, deploying and maintaining business modules. (By FY 2014, the NBS will be in an ongoing status) (Output)</p>	<p>FY 2012: Maintained post deployment support for Service and Supply Activities Fund Module and NIH Grants Interface Module (ERA) through full user support via direct support and supplemental training materials.</p> <p>Target: (Maintenance [Mat]) Maintain deployed business modules. * Planned - Service and Supply Activities Fund Module [Dep.2012] * Planned - NIH Grants Interface Module (ERA) [Dep.2011]</p> <p>(Target Met)</p> <p>FY 2012: Deployed Service and Supply Activities Fund Module.</p> <p>The deployment of Service and Supply Activities Fund functionality in the NBS moves NIH closer to retiring the ADB/CAS, NIH's legacy financial system.</p> <p>Target: (Deployment [Dep]) Conduct priority deployment activities to enable user accessibility and skill development within two years from the onset of integration. * Planned - Service and Supply Activities Fund Module [Int.2012/Mat.2012]</p> <p>(Target Met)</p>	<p>(Maintenance [Mat]) Maintain deployed business modules. * Planned - Service and Supply Activities Fund Module [Dep.2012]</p> <p>(Development [Dev]) Initiate development of planned business modules to build capacity and functionality of the NIH Business System.* Planned - Animal Procurement [Int.2013]</p>	<p>(Integration [Int]) Complete integration activities for full functionality and usability of priority modules for successful development efforts within three years of initiated development. * Planned - Oracle 12i Upgrade [Dev.2011-12/Dep.2015]</p> <p>(Deployment [Dep]) Conduct priority deployment activities to enable user accessibility and skill development within two years from the onset of integration. * Planned - Animal Procurement [Dev.2013/Dep. 2014]</p>	<p>N/A</p>

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
<p>CBRR-2 Promote data sharing and provide information in real time through the NIH Business System (NBS) by developing, integrating, deploying and maintaining business modules. (By FY 2014, the NBS will be in an ongoing status) (Output)</p> <p>Continued</p>	<p>FY 2012: Completed integration for Service and Supply Activities Fund Module as two components, Indirect Projects and Capital Projects.</p> <p>Target: (Integration [Int]) Complete integration activities for full functionality and usability of priority modules for successful development efforts within three years of initiated development.* Planned - Service and Supply Activities Fund Module [Dev.2011/Dep.2012]</p> <p>(Target Met)</p> <p>FY 2012: Completed Oracle R12 work through the Design Phase.</p> <p>Target: (Development [Dev]) Initiate development of planned business modules to build capacity and functionality of the NIH Business System. * Planned - Oracle 12i Upgrade [continuation from Dev. start in 2011/Int.2013-14]</p> <p>(Target Met)</p>	<p>(Integration [Int]) Complete integration activities for full functionality and usability of priority modules for successful development efforts within three years of initiated development.* Planned - Animal Procurement [Dev.2013/Dep.2014]* Planned - Oracle 12i Upgrade [Dev.2011-12/Dep.2015]</p>		<p>N/A</p>

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
CBRR-4 By 2012, provide greater functionality and more streamlined processes in grants administration by continuing to develop the NIH electronic Research Administration (eRA) system. (Output and Efficiency)	<p>FY 2012: All applications and awards are available by electronic transmission in the electronic Research Administration (eRA) system. NIH processed approximately 98% of all FY 2012 grant business transactions electronically and deployed other electronic functions for administrative supplements.</p> <p>Target: Complete development of business processes to enable the electronic transmission of grant applications and awards.</p> <p>(Target Met)</p>			N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
<p>CBRR-6.2 By 2016 complete construction/commissioning of 15 biocontainment facilities to support biodefense and emerging infectious disease research needs, including research on Category A-C Priority agents and newly emerging infectious diseases. (Output)</p>	<p>FY 2012: University of Hawaii has completed the 15% design submittal including the schematic design phase where drawings are complete enough to illustrate the design intent for all disciplines, and the Basis of Design Report.</p> <p>Target: Conduct design development.</p> <p>(Target Met)</p>	<p>Conduct design development</p> <p>Previous target: Begin construction on final research facility.</p>	<p>Begin facility construction</p>	<p>N/A</p>
<p>CBRR-8 By 2012, ensure that 100% of trainee appointment forms are processed electronically, to enhance program management. (Output)</p>	<p>FY 2012: 100% of FY 2012 appointment forms were submitted and processed electronically.</p> <p>Target: Ensure that 100% of trainee appointment forms are processed electronically.</p> <p>(Target Met)</p>			<p>N/A</p>

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
<p>CBRR-10 By 2015, make freely available to researchers the results of 400 high-throughput biological assays screened against a library of 300,000 unique compounds, and the detailed information on the molecular probes that are developed through that screening process. (Outcome)</p>	<p>FY 2012: The Molecular Libraries Program deposited chemical structure and biological data for 294 new small molecule probes in PubChem since the program began.</p> <p>Target: Deposit chemical structure and biological data for 200 new small molecule probes in PubChem.</p> <p>(Target Exceeded)</p>	<p>Establish 400 primary biochemical, cell-based or protein-protein interaction assays that can be miniaturized and automated as high throughput screens in the Molecular Libraries Program (MLP) Portfolio.</p>	<p>Increase the Molecular Libraries Program (MLP) inventory to 350small molecule probes that can be used in biological research to interrogate basic biological processes or disease.</p>	<p>N/A</p>

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
CTR-1 By 2014, reduce the disparity between African American and white infants in back sleeping by 50% to further reduce the risk of sudden infant death syndrome (SIDS). (Outcome and Efficiency)	<p>FY 2012: The NIH successfully conducted 23 SIDS risk reduction activities across seven of the nine health districts in Mississippi for African American communities.</p> <p>Target: Conduct 23 SIDS risk reduction activities for African American caregivers and health providers serving African Americans across all of the nine health districts in Mississippi.</p> <p>(Target Met)</p>	Convene two meetings with two or more federal agencies on how to coordinate efforts to reduce SIDS in African American communities across the nation.	Conduct a SIDS risk-reduction training workshop at the National Baptist Convention's annual meeting session, which has an attendance of approximately 10,000 African American church delegates from across the country.	N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
<p>CTR-8 By 2012, increase communication efforts and enhance centralized outreach strategies regarding extramural research funding policy, compliance and administration as demonstrated by the type and frequency of communications and related activities. (Outcome)</p>	<p>FY 2012: NIH completed rollout of a Director of Extramural Research blog, and expanded the research community's ability to comment on articles in monthly updates from the Office of Extramural Research. All blog posts and articles are tweeted as well.</p> <p>Target: Incorporate at least one new social networking technology as a modality for NIH stakeholders to obtain information on new grants initiatives, policies and/or processes.</p> <p>(Target Met)</p>			N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
CTR-9 By 2012, increase awareness of the NIH SBIR and STTR funding opportunities available for women-owned and socially and economically disadvantaged small business concerns (SBCs). (Outcome)	<p>FY 2012: NIH co-sponsored SBIR/STTR outreach events targeting woman-owned and socially and economically disadvantaged small businesses with two regional groups representing EPSCoR (Experimental Program to Stimulate Competitive Research) states.</p> <p>Target: Partner with a minimum of two regional groups dedicated to women-owned or socially and economically disadvantaged small businesses to enable knowledge transfer, increase awareness, and increase access to SBIR/STTR opportunities.</p> <p>(Target Met)</p>			N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
CTR-10 By 2014, expand the scope of the Hazardous Substances Data Bank to include 14 nanomaterials. (Outcome)	<p>FY 2012: The Hazardous Substances Data Bank was augmented with comprehensive records for seven nanomaterials.</p> <p>Target: Augment the Hazardous Substances Data Bank with comprehensive records for four nanomaterials and review initial database specifications.</p> <p>(Target Met)</p>	Augment the Hazardous Substances Data Bank with comprehensive records for five nanomaterials.	Augment the Hazardous Substances Data Bank with comprehensive records for five nanomaterials.	N/A
POI-2 Utilize performance-based contracting (PBC). (ongoing) (Output)	<p>FY 2012: Obligated 36% of eligible service contracting dollars through performance-based contracting.</p> <p>Target: Obligate the FY 2012 OMB/OFPP goal of eligible service contracting dollars to PBC.</p> <p>(Target Not Met)</p>	Obligate the FY 2013 OMB/OFPP goal of eligible service contracting dollars to PBC.	Obligate the FY 2014 OMB/OFPP goal of eligible service contracting dollars to PBC.	N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
POI-6.1 Improve facility conditions in order to reach and maintain a Condition Index (CI) weighted average of 85 or above (CIwa=85). (Ongoing) (Output and Efficiency)	FY 2012: The condition of the portfolio reached a CIwa of 72.1. Target: CIwa = 75.9 (Target Not Met)	CIwa = 75.4	CIwa = 72.1	N/A
POI-6.2 By 2017, maintain the annual condition of buildings and facilities portfolio so that no less than 95% of occupied gross square feet (GSF) will have a CI greater than 65. (Ongoing) (Output and Efficiency)	FY 2012: The FY 2012 target of 69.6% was not met. 67.2% of the occupied space reached a CI.65%. Target: Target= 69.6% (Target Not Met)	Target = 69.6%	Target = 69.7%	N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
<p>POI-7.1 Manage all Buildings and Facilities (B&F) line item projects so it is completed within 100% of the final approved project cost. (Ongoing) (Output)</p>	<p>FY 2012: The eight active non-Recovery Act funded projects at the HHS Facility Project Approval Agreement (FPAA) level threshold were effectively managed to ensure completion within 100% of the final approved project cost.</p> <p>Target: Eight active projects (Target Met)</p> <p>FY 2012: The twelve (12) active Recovery Act funded projects at the HHS Facility Project Approval Agreement (FPAA) threshold were managed effectively to ensure completion within 100% of the final approved project cost.</p> <p>Target: (2012 RA) 12 active Recovery Act funded projects (Target Met)</p>	<p>12 Active Projects Previous target: Six Active Projects</p> <p>(2013 RA) Eight Active Recovery Act projects Previous target: four Active Recovery Act projects</p>	<p>11 Active Projects</p> <p>(2014 RA) Two Active Recovery Act projects</p>	<p>N/A</p>

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
POI-7.2 Manage design and construction of capital facility projects funded by B&F so that no more than 10% of the projects may incorporate plus or minus 10% adjustments of the approved scope. (Ongoing) (Output)	<p>FY 2012: The design and construction of the eight (8) active non-Recovery Act funded projects was managed effectively so that no more than 10% of the projects incorporated a plus or minus 10% adjustments of the approved scope.</p> <p>Target: Eight active projects / $10\% \leq 1$</p> <p>(Target Met)</p> <p>FY 2012: The design and construction of the 12 active reportable Recovery Act funded projects was managed effectively so that no more than 10% of the projects incorporated a plus or minus 10% adjustments of the approved scope.</p> <p>Target: (2012 RA) 12 active Recovery Act funded projects / $10\% \leq 1$</p> <p>(Target Met)</p>	<p>12 Active Projects Previous target: Six Active Projects</p> <p>(2013 RA) Eight Active Recovery Act funded Projects Previous target: Four Active Recovery Act funded Projects</p>	<p>11 Active Projects</p> <p>(2014 RA) Two Active Recovery Act funded project</p>	<p>N/A</p>

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
<p>POI-8.1 By 2013, ensure that 100% of grantees have met all construction requirements, including NIH approved design and construction documents that ensures proposed research in the space is feasible, and ensures that grantees will take action to file or record a Notice of Federal Interest that ensures grantees cannot lease, sell or mortgage property without NIH approval. (Output)</p>	<p>FY 2012: 100% of projects under construction have approved design and construction documents and ensured the Notice of Federal interest has been recorded.</p> <p>Target: (2012RA) Ensure that 100% of 50 grantees have met all construction requirements.</p> <p>(Target Met)</p>	<p>(2013RA) Ensure that 100% of 79 grantees have met all construction requirements.</p>		<p>N/A</p>
<p>POI-8.2 By 2015, report the percent of extramural construction projects that are in compliance with the post award 20 year usage requirement to conduct research. (Output)</p>	<p>FY 2012: 100% of the extramural construction projects were in compliance with the post award 20 year usage requirement.</p> <p>Target: 95% of 177 projects are in compliance.</p> <p>(Target Met)</p>	<p>95% of 219 projects are in compliance.</p>	<p>95% of 196 projects are in compliance.</p>	<p>N/A</p>

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
POI-9 By 2015, reallocation of laboratory resources based on external reviews by Boards of Scientific Counselors. (Output)	<p>FY 2012: 25% of Principal Investigators were reviewed resulting in 25% of resources recommended to be reallocated.</p> <p>Target: Conduct BSC reviews of 25% of Principal Investigators to assess quality of science in order to prioritize resources.</p> <p>(Target Met)</p>	Conduct BSC reviews of 25% of Principal Investigators to assess quality of science in order to prioritize of resources.	Conduct BSC reviews of 25% of principal Investigators to assess quality of science in order to prioritize resources.	N/A
SMHC-4 By 2012, ensure NIH reports tracked commercial functions and cost savings from completed commercial services studies efficiently and on time. (Output and Efficiency)	<p>FY 2012: FAIR Act Inventory was submitted in 2012 and PCA reporting is completed for the three remaining Letters of Obligation (LOOs).</p> <p>Target: Complete FAIR Act Inventory and Post-Competition Accountability reporting.</p> <p>(Target Met)</p>			N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
<p>SMHC-5 By 2012, improve and monitor the use of human resource services by providing real-time access to tools via the NIH portal. (Output and Efficiency)</p>	<p>FY 2012: NIH evaluated system for efficiencies, determined the systems inefficiencies and monitored satisfaction and usage of portal pages, portlets, used to improve the portal usability, and upgraded the Portal to new a intranet website.</p> <p>Target: Determine pathway for upgrading Portal technology.</p> <p>(Target Met)</p>			N/A

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
<p>SMHC-6 Provide opportunities for enhanced leadership skills to meet the challenges of workforce management and/or individual advancements. (Ongoing) (Output)</p>	<p>FY 2012: The NIH Mid-Level Leadership Program has been an unequivocal success. The reviews of the program from participants, supervisors of participants, and senior leadership have been very high, and demand has increased to the point that capacity is being expanded.</p> <p>Target: Assess [AS] results of implementation. * Assess results from leadership development program for new supervisors and individual performers preparing for supervisory roles. [IM 2011]</p> <p>(Target Exceeded)</p>	<p>Assess [AS] results of implementation. * Assess results from executive onboarding program. [IM 2012]</p> <p>Implement [IM] recommendation from prior year assessments. * Create and implement revised supervisory training. [EX.2012/AS .2014]</p>	<p>Assess [AS] results of implementation * Assess results from revised supervisory training. [IM 2013]</p> <p>Implement [IM] recommendation from prior year assessments * Implement best practices in implementing and evaluating executive coaching programs in the federal sector. [AS 2013]</p>	<p>N/A</p>

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
<p>SMHC-6 Provide opportunities for enhanced leadership skills to meet the challenges of workforce management and/or individual advancements. (Ongoing) (Output)</p> <p>Continued</p>	<p>FY 2012: NIH has created a robust executive onboarding program, which helps new executives become accustomed to working at NIH. Since its inception, every new executive has participated.</p> <p>Target: Implement [IM] recommendation from prior year assessments. * Create and implement an executive on-boarding program. [EX.2011/AS.2013]</p> <p>(Target Exceeded)</p> <p>FY 2012: NIH benchmarked supervisory training practices across HHS, formed a cross-IC Supervisory Training Committee, and co-chaired the HHS Learning Council, and developed an HHS-wide supervisory training policy.</p> <p>Target: Examine [EX] key area to enhance leadership skills. * Study best practices in supervisory training for federal populations and analyze NIH results from the employee viewpoint survey to determine if there are better ways to implement basic mandatory training for all new and existing supervisors. [IM 2013]</p> <p>(Target Exceeded)</p>	<p>Examine [EX] key area to enhance leadership skills. * Study best practices in implementing and evaluating executive coaching programs in the federal sector. [IM 2014]</p>	<p>Examine [EX] key area to enhance leadership skills. * Study NIH's administrative intern and fellows program to determine if there are improvements, efficiencies, or additional best practices that can enhance long-standing programs intended to recruit and develop the best and the brightest for future NIH leadership roles. [IM 2015]</p>	<p>N/A</p>

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
<p>SMHC-7 Address diverse workforce recruitment needs to ascertain highly qualified staff to conduct or support biomedical research. (Ongoing) (Output)</p>	<p>FY 2012: HR CARDS content expanded by an additional 7%.</p> <p>Completion of standardized recruitment packages for the Top 40 uploaded into the database.</p> <p>Target: Assess [AS] results of implementation. *Results from the use of Human Resources Classification and Recruitment Document System (HR CARDS). [IM 2011]</p> <p>(Target Met)</p> <p>FY 2012: Implemented robust recruitment program to include social media for hard-to fill positions to increase the applicant pool.</p> <p>Standardized recruitment packages have been developed for the top 40 series most recruited at NIH.</p> <p>Target: Implement [IM] key area to enhance recruitment. *Implement re-engineering strategies for existing HR policies and procedures, to support the 80 day hiring timeline instituted by OPM.[EX 2011] [AS 2013]</p> <p>(Target Met)</p>	<p>Implement [IM] key area to enhance recruitment</p> <p>*Develop corporate recruitment strategy to focus on diversity recruiting, student recruiting, and trans-NIH hiring. [EX 2012] [AS 2014]</p> <p>*Create the Scientific and Medical Recruitment Forum (SMRF) to attract world-class scientists and medical professionals to drive discovery and innovation at NIH. [IM 2014] [AS 2015]</p> <p>Examine [EX] key area to enhance recruitment</p> <p>*Establish increased oversight and review of Title 42 recruitment. [IM 2014] [AS 2015]</p>	<p>Implement [IM] key area to enhance recruitment</p> <p>*Increase oversight and review of Title 42 recruitment. [EX 2013] [AS 2015]</p> <p>Implement [IM] key area to enhance recruitment</p> <p>*Increase participation in Pathways Program to promote a focused student and entry level recruitment plan that supports succession planning efforts at NIH. [EX 2013] [AS 2015]</p>	<p>N/A</p>

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
<p>SMHC-7 Address diverse workforce recruitment needs to ascertain highly qualified staff to conduct or support biomedical research. (Ongoing) (Output)</p> <p>Continued</p>	<p>FY 2012: Created an office to manage the upcoming Pathways program to ensure consistent recruitment and hiring of interns.</p> <p>Target: Examine [EX] key area to enhance recruitment. *Develop corporate recruitment strategy to focus on diversity recruiting, student recruiting, and trans-NIH hiring. [IM. 2013/ AS. 2014]</p> <p>(Target Met)</p>	<p>Examine [EX] key area to enhance recruitment</p> <p>*Implement Pathways Program to establish a focused student and entry level recruitment plan that supports succession planning efforts at NIH. [IM 2014] [AS 2015]</p>	<p>Assess [AS] results of implementation and [IM] implement key areas to enhance recruitment</p> <p>*Evaluate corporate recruitment strategies: diversity and student recruiting, and trans-NIH hiring. [EX 2012] [IM 2013]</p> <p>*Develop the Scientific and Medical Recruitment Forum (SMRF) to continue attracting world-class scientists and medical professionals to drive discovery and innovation at NIH.</p>	<p>N/A</p>

Measure	Year and Most Recent Result / Target for Recent Result / (Summary of Result)	FY 2013 Target	FY 2014 Target	FY 2014 Target +/-FY 2012 Target
SMHC-8 By 2012, address areas to facilitate retention of highly qualified staff to conduct or support biomedical research. (Ongoing) (Output)	<p>FY 2012: Over the past three years, the NIH Telework program participation has increased by 66%.</p> <p>Target: Assess [AS] results of implementation. *Results from implemented telework study participation program. [EX 2010 / IM 2011]</p> <p>(Target Met)</p>			N/A