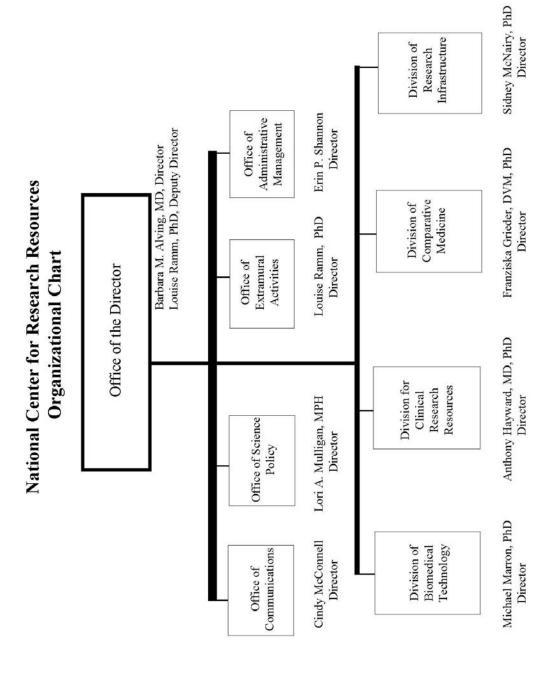
### DEPARTMENT OF HEALTH AND HUMAN SERVICES

### NATIONAL INSTITUTES OF HEALTH

### National Center for Research Resources (NCRR)

FY 2011 Budget	Page No.
Organization chart	2
Appropriation language	3
Amounts available for obligation	4
Budget mechanism table	5
Budget authority by activity	6
Major Changes in Budget Request	7
Summary of changes	8
Budget Graphs	10
Justification narrative	11
Budget authority by object	27
Salaries and expenses	28
Authorizing legislation	29
Appropriations history	30
Detail of full-time equivalent employment (FTE)	31
Detail of positions	32
New positions requested	33



#### **NATIONAL INSTITUTES OF HEALTH**

National Center for Research Resources

For carrying out section 301 and title IV of the Public Health Services Act with respect to research resources and general research support grants [\$1,268,896,000] \$1,308,741,000 (Public Law 111-117, Consolidated Appropriations Act, 2010)

## National Institutes of Health National Center for Research Resources

### Amounts Available for Obligation 1/

Source of Funding	FY 2009 Actual	FY 2010 Enacted	FY 2011 PB
Appropriation	\$1,226,263,000	\$1,268,896,000	\$1,308,741,000
Type 1 Diabetes	0	0	0
Rescission	0	0	0
Supplemental	0	0	0
Subtotal, adjusted appropriation	1,226,263,000	1,268,896,000	1,308,741,000
Real transfer under Director's one-percent transfer authority (GEI)	-1,607,000	0	0
Comparative transfer to NLM for the NCBI assessment	-193,000	-301,000	0
Comparative transfer to NLM for the Public Access assessment	-70,000	-76,000	0
Comparative transfer under Director's one-percent transfer authority (GEI)	1,607,000	0	0
Subtotal, adjusted budget authority	1,226,000,000	1,268,519,000	1,308,741,000
Unobligated balance, start of year	0	0	0
Unobligated balance, end of year	0	0	0
Subtotal, adjusted budget authority	1,226,000,000	1,268,519,000	1,308,741,000
Unobligated balance lapsing	-27,000	0	0
Total obligations	1,225,973,000	1,268,519,000	1,308,741,000

 $<sup>\</sup>underline{1}$ / Excludes the following amounts for reimbursable activities carried out by this account: FY 2009 - \$2,758,000 FY 2010 - \$5,000,000 FY 2011 - \$5,000,000

(Dollars in Thousands) Budget Mechanism - Total

	-			jet Mechanis								
		′ 2009	FY 2009 R	(1 <del>5</del> X		0 Recovery		2010		′ 2011		
MECHANISM		ctual	Act Ac	tual	Act E	stimated		nacted		PB		ange
Research Grants:	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No. 7	Amount
Research Projects:												
Noncompeting	60	\$17,101	0	\$0	19	\$5,568	80	\$22,350	68	\$20,439	(12)	-\$1,911
Administrative supplements	(1)	293	(18)	5,997	(0)	0	(4)	400	(0)	0	(4)	(400)
Competing:	10 14		2 0	*0			~ ~		27 33			
Renewal	5	2,528	1	522	0	0	2	650	2	650	0	0
New	42	11,563	18	4,989	2	2,000	41	12,340	49	15,064	8	2,724
Supplements	1	124	5	2,114	9	2,700	0	0	0	0	0	0
Subtotal, competing	48	14,215	24	7,625	11	4,700	43	12,990	51	15,714	8	2,724
Subtotal, RPGs	108	31,609	24	13,622	30	10,268	123	35,740	119	36,153	(4)	413
SBIR/STTR	97	32,071	0	0	0	0	107	33,203	110	37,040	3	3,837
Subtotal, RPGs	205	63,680	24	13,622	30	10,268	230	68,943	229	73,193	(1)	4,250
Research Centers:		*		**		₩.				*		
Specialized/comprehensive	100	224,073	4	62,399	0	8,331	100	228,562	100	235,419	0	6,857
Clinical research	67	419,352	2	71,932	0	5,664	63	425,801	63	421,059	0	-4,742
Biotechnology	49	82,729	0	20,652	0	1,148	48	81,747	48	84,199	0	2,452
Comparative medicine	47	130,224	0	23,747	0	668	47	123,572	47	127,279	0	3,707
Research Centers in Minority Institutions	23	57,040	0	14,432	0	11,467	23	58,757	23	60,520	0	1,763
Subtotal, Centers	286	913,418	6	193,162	0	27,278	281	918,439	281	928,476	0	10,037
Other Research:	8. 15	1200 10000	853	36	8	100	20000	60 500 6	8.8	5000 S0000	2020	000000000000000000000000000000000000000
Research careers	91	20,629	0	0	0	0	101	48,524	98	64,274	(3)	15,750
Cancer education	0	0	0	0	0	0	0	0	0	0	0	0
Cooperative clinical research	0	0	0	0	0	0	0	0	0	0	0	0
Biomedical research support	117	63,711	84	52,735	430	247,265	118	64,228	118	66,155	0	1,927
Minority biomedical research support	0	05.004	0	0	0	0	0	0 700	0	05.040	0	4 040
Other	157	65,981	31	31,936	344	15,620	149	63,736	145	65,648	(4)	1,912
Subtotal, Other Research	365	150,321	115	84,671	774	262,885	368	176,488	361	196,077	(7)	19,589
Total Research Grants	856	1,127,419	145	291,455	804	300,431	879	1,163,870	871	1,197,746	(8)	33,876
Bassavah Tusininan	CTTD.		ETTD.		CTTD.		CTTD.		ETTD.			
Research Training: Individual awards	FTTPs 1	63	<u>FTTPs</u> 0	0	FTTPs 0	0	FTTPs 0	0	FTTPs 0	0	0	0
Institutional awards	134	6,535	0	0	0	0	135	6,664	135	6,977	0	313
Total, Training	135	6,598	0	0	0	0	135	6,664	135	6,977	0	313
Total, Training	133	0,550	U	,0	"	0	100	0,004	155	0,311		515
Research & development contracts	91	56,218	0	0	1	12,000	87	61,704	89	65,912	2	4,208
(SBIR/STTR)	(4)	(437)	(0)	(0)	(0)	(0)	(2)	(104)		(104)		(0)
,	1.3	, <i>i</i>	1.7	-7-7	1-1	7.7	,-/	37	1-7	¥y	7.7	131
	<u>FTEs</u>		<u>FTEs</u>		<u>FTEs</u>		<u>FTEs</u>		<u>FTEs</u>		<u>FTEs</u>	
Intramural research	0	0	0	0	0	0	0	0	0	0	0	0
Research management and support	124	35,765	0	1,356	0	4,846	119	36,281	124	38,106	5	1,825
Construction	92 WAS	0		52,108	1407	947,892	24 2504	0	20170-000	0		0
Buildings and Facilities		0		0		0		0		0		0
Total, NCRR	124	1,226,000	0	344,919	0	1,265,169	119	1,268,519	124	1,308,741	5	40,222

NATIONAL INSTITUTES OF HEALTH
National Center for Research Resources
BA by Program
(Dollars in thousands)

	FY 2007	20	FΥ	FY 2008	FY;	FY 2009	FΥ	FY 2009	FΥ	FY 2010	FΥ	FY 2011		
	Actual	_	Ac	Actual	Aci	Actual	Comp	Comparable	E	Enacted		PB	č	Change
Extramural Research Detail:	FTES	Amount	FTES	Amount	FTES	Amount	FTES	Amount	FTES	Amount	FTES	Amount	FTEs Amount	Amount
Clinical Research	s	\$389,439		\$440,677		484,345		485,019		514,738		\$526,472		11,734
Clinical and Translational Science Awards/														
General Clinical Research Centers		327,487		376,265		431,264		431,264		457,700		477.700		20,000
Science Education Partnership Award		16,009		16,183		18.034		18,034		18,324		18.874		550
Clinical Research Resources - General		45,943		48,229		35,047		35,721		38,714		29,898		-8,816
Biotechnology Research		233,635		200,634		212,704		212,954		214,199		224,262		10,063
Shared Instrumentation Grants		98,312		63,533		63,711		63,711		64,228		66,155		1,927
Biotechnology Research Resources - General		135,323		137,101		148,993		149,243		149,971		158,107		8,136
Comparative Medicine		189,398		188,695		192,689		192,957		196,918		203,684		6,766
National Primate Research Centers		79,638		80,283		93.039		93,039		83,895		86,412		2,517
Comparative Medicine - General		109,760		108,412		99.650		99,918		113,023		117,272		4,249
Research Infrastructure		291,192		292,639		298,890		299,305		306,383		316,217		9,834
Research Centers in Minority Institutions		52,707		52,511		57,040		57,040		58,757		60.520		1,763
Institutional Development		218,153		223,607		224,358		224,358		228,862		235,728		6,866
Extramural Construction		0		0		0		0		0		0		
Research Infrastructure - General		20,332		16,521		17,492		17,907		18,764		19,969		1,205
		-												
Subtotal, Extramural	1,	1,103,664		1,122,645		1,188,628	363)	1,190,235		1,232,238		1,270,635		38,397
Intramural research					0	0	0	0	0	0	0	0	0	0
Res. management & support	108	27,954	105	31,266	124	36,001	124	35,765	119	36,281	124	38,106	ď	1,825
TOTAL	108 1.1	108 1,131,618	105	105 1,153,911	124	124 1,224,629	124	124 1,226,000	119	119 1,268,519		124 1,308,741	2	40,222

Includes FTEs which are reimbursed from the NIH Roadmap for Medical Research

#### Major Changes in the Fiscal Year 2011 Budget Request

Major changes by budget mechanism and/or budget activity are briefly described below. Note that there may be overlap between budget mechanism and activity detail and these highlights will not sum to the total change for the FY 2011 budget request for NCRR, which is \$40.222 million more than the FY 2010 enacted level, for a total of \$1,308.741 million.

Research Project Grants (RPGS; +\$4.250 million; total \$73.193 million): NCRR will continue to maintain an adequate number of competing RPGs—51 awards in FY 2011, an increase of 8 awards over FY 2010. About 68 noncompeting RPG awards, totaling \$20.439 million also will be made in FY 2011. NCRR will support 110 SBIR/STTR awards at a total cost of \$37.040 million, which is an increase of 3 awards and \$3.837 million over FY 2010. NIH RPG budget policy provides a 2 percent inflationary increase for noncompeting awards and a 2 percent increase in the average cost for competing awards.

Clinical Research, Research Centers (-\$4.742 million; total \$421.059 million): While NCRR will continue to expand its support of the Clinical and Translational Science Awards (CTSAs) program, NCRR will support fewer General Clinical Research Center (GCRC) awards in FY 2011 as these grants end or convert to CTSAs. In addition to the \$418.896 million funded for the CTSA/GCRC program in the Clinical Research, Research Centers mechanism, \$58.804 million is funded in the Other Research, Research Careers mechanism.

Other Research, Research Careers (+\$15.750 million; \$64.274 million): In addition to new FY 2011 CTSA research career awards, NCRR will fund more of these awards previously supported with NIH Common Fund/Roadmap for Medical Research funds because the contribution from this funding source continues to decrease each fiscal year. It is anticipated that FY 2011 will be the last fiscal year the Common Fund/Roadmap for Medical Research will contribute to the CTSA/GCRC program.

### NATIONAL INSTITUTES OF HEALTH National Center for Research Resources Summary of Changes

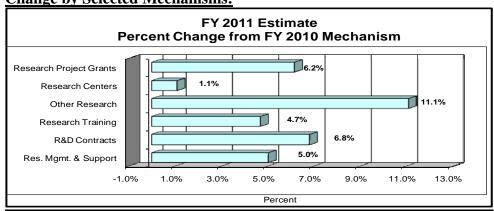
FY 2010 estimate				\$1,268,519,000
FY 2011 estimated budget authority				1,308,741,000
Net change				40,222,000
	20	10 Current		
	Est	imate Base	Chang	e from Base
		Budget		Budget
CHANGES	FTEs	Authority	FTEs	Authority
A. Built-in:				
Intramural research:				
a. Annualization of January				
2010 pay increase		\$0		\$0
b. January FY 2011 pay increase		0		0
c. Zero less days of pay (n/a for 2011)		0		0
d. Payment for centrally furnished services		0		0
e. Increased cost of laboratory supplies,		0		0
materials, and other expenses		Ü		0
Subtotal				0
Research management and support:				
a. Annualization of January				
2010 pay increase		\$17,779,000		\$108,000
b. January FY 2011 pay increase		17,779,000		187,000
c. Zero less days of pay (n/a for 2011)		17,779,000		0
d. Payment for centrally furnished services		2,162,000		43,000
e. Increased cost of laboratory supplies,				
materials, and other expenses		16,340,000		266,000
Subtotal				604,000
Subtotal, Built-in				604,000

### **Summary of Changes--continued**

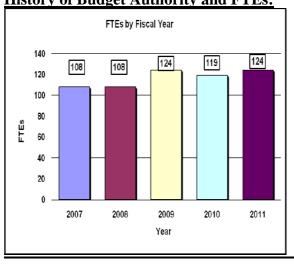
	20	10 Current		
	Est	timate Base	Chang	e from Base
CHANGES	No.	Amount	No.	Amount
B. Program:				
Research project grants:				
a. Noncompeting	80	\$22,750,000	(12)	(\$2,311,000)
b. Competing	43	12,990,000	8	2,724,000
c. SBIR/STTR	107	33,203,000	3	3,837,000
Total	230	68,943,000	(1)	4,250,000
2. Research centers	281	918,439,000	0	10,037,000
3. Other research	368	176,488,000	(7)	19,589,000
4. Research training	135	6,664,000	0	313,000
5. Research and development contracts	87	61,704,000	2	4,208,000
Subtotal, extramural				38,397,000
	FTEs		<u>FTEs</u>	,,
6. Intramural research	0	0	0	0
7. Research management and support	119	36,281,000	5	1,221,000
8. Construction		0		0
Buildings and Facilities		0		0
Subtotal, program		1,268,519,000		39,618,000
Total changes	119		5	40,222,000

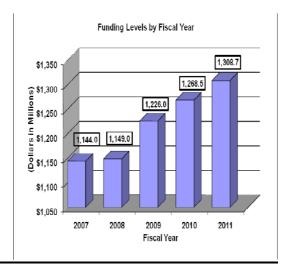
#### Fiscal Year 2011 Budget Graphs

**Change by Selected Mechanisms:** 

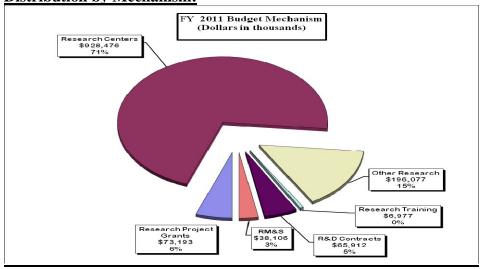


**History of Budget Authority and FTEs:** 





#### **Distribution by Mechanism:**



#### Justification of Budget Request National Center for Research Resources

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

amended.

**Budget Authority:** 

		FY 2011	FY 2011+/
FY 2009	FY 2010	President's	2010
Omnibus	Appropriation	Budget	Appropriation
BA \$1,226,000,000	\$1,268,519,000	\$1,308,741,000	+40,222,000
FTE 124	119	124	+5

This document provides justification for the Fiscal Year (FY) 2011 activities of the National Center for Research Resources, including HIV/AIDS activities. Details of the FY 2011 HIV/AIDS activities are in the "Office of AIDS Research (OAR)" Section of the Overview. Details on the Common Fund are located in the Overview, Volume One. Program funds are allocated as follows: Competitive Grants/Cooperative Agreements; Contracts; Direct Federal/Intramural and Other.

#### **Director's Overview**

NCRR provides researchers with training and support that extends from the laboratory to clinical trials and into dissemination of strategies and treatments to improve health. NCRR programs, which are present in every state of the Nation, train investigators and accelerate advances in clinical research, biomedical technology, and comparative medicine. In addition, they enhance biomedical research opportunities for minority and other underserved communities. Through programs such as the Clinical and Translational Science Awards (CTSAs), Institutional Development Awards (IDeA), and Research Centers in Minority Institutions (RCMI), NCRR supports all aspects of translational and clinical research, connecting researchers, patients, and communities across the nation.

## Improving the Efficiency of Clinical and Translational Science through the CTSA Consortium

Led by NCRR, the CTSAs are a national consortium of 46 academic health centers working with NIH to: reduce the time it takes for laboratory discoveries to become treatments for patients; engage communities in clinical research efforts; and, train a new generation of clinical and translational researchers to work as interdisciplinary teams. NCRR is on target to reach 60 CTSAs by FY 2011 at a total cost of \$500 million per year.

One of the areas the CTSAs are targeting is to shorten the time between design of a clinical research protocol and actual initiation of the clinical study. As a direct result of efficiencies created by the CTSA program, researchers can quickly mobilize to expedite

institutional review board review of research protocols, secure resources for clinical trials, and prioritize contract negotiations. In turn, these efforts will reduce the time it takes to begin enrolling patients. For example, several CTSAs used this increase in efficiency to rapidly initiate federally funded clinical trials of the 2009 H1N1 influenza vaccine. The CTSAs are also working to increase the efficiency of drug development through public-private partnerships. Additionally, CTSAs can provide support needed for comparative effectiveness research by contributing capacity to conduct this type of research, developing new approaches to study design, and establishing close working relationships with community partners.

#### **Speeding Translational Research with Primate Centers and Animal Models**

The potential to advance research discoveries from the bench into early clinical studies requires preclinical studies that involve the appropriate animal models. NCRR is funding pilot projects that promote collaborations among researchers with expertise in animal models and clinical investigators at CTSAs or RCMIs. These projects support the NIH's priority of translating basic science discoveries into new and better treatments. Additionally, NCRR is coordinating with other NIH components to ensure that sufficient numbers of specific-pathogen free nonhuman primates are available to support HIV/AIDS vaccine research. NCRR-supported researchers from the National Primate Research Centers and the Biomedical Informatics Research Network are also collaborating to increase efficiencies and improve data collection and sharing. In FY 2011, NCRR plans to fund a new initiative to increase the number of veterinarians trained in the specialty of laboratory animal medicine.

### **Advancing Biomedical Technologies**

Advances in biomedical technology are a critical component in clinical care improvements. Moving these advances from the research setting into clinical application is one of the strengths of the NCRR-supported Biomedical Technology Research Centers (BTRCs). For example, researchers at the BTRCs are developing enhanced imaging tools and techniques to better predict treatment response in cancer patients and to pinpoint causes of lower back pain.

#### **Expanding Research Opportunities through the IDeA Program**

The IDeA program fosters biomedical research training and career development as well as increases the competitiveness of investigators in 23 states and Puerto Rico. IDeA funding is helping the Northeast Cyberinfrastructure Consortium build the first high-speed, fiber-optic backbone through northern New England. The project will facilitate collaborative research, including large-scale genomics studies, and provide academic faculty as well as undergraduate and graduate students training opportunities in biomedical research.

#### Working to Reduce Health Disparities through the RCMI Program

The RCMI program expands the research capabilities of minority colleges and universities that offer doctorates in health sciences. The RCMI Translational Research Network (RTRN) is encouraging sharing of resources and expertise among researchers who are studying diseases unique to minority and other medically underserved

communities. For example, RTRN investigators are studying the association of vitamin D levels with markers of cardiovascular function in African American participants.

#### **Encouraging Collaborations among NCRR Programs**

Collaborations among CTSA, IDeA, and RCMI grantees are creating synergy in areas such as clinical informatics, research training, community engagement, and health disparities research. Additionally, the research capacity established through the IDeA program helped two institutions in IDeA states, Arkansas and South Carolina, obtain CTSA grants. Similarly, three CTSA and RCMI partnerships (Emory University with Morehouse School of Medicine, Vanderbilt University with Meharry Medical College, and Weill Cornell Medical College with Hunter College) are benefiting from the strengths and expertise of each partnering institution. Collaborations are also underway between CTSAs and the Biomedical Technology Research Centers and the National Primate Research Centers.

This brief overview of NCRR's programs demonstrates the Center's continuing commitment to accelerating clinical and translational research. Throughout the coming year, NCRR will encourage partnerships among its programs as well as those of the other Institutes and Centers at the NIH, and with other Federal and non-Federal agencies to advance training and translational research opportunities.

Overall Budget Policy: The FY 2011 request for NCRR is \$1,308.741 million, an increase of \$40.222 million or +3.2 percent over the FY 2010 enacted level. NCRR's highest priorities are to continue to support all aspects of translational and clinical research, develop versatile new technologies and methods, provide access to critical animal models, and enhance development programs for underserved states and institutions. The largest portion of NCRR's budget supports Research Center grants. These grants provide support for long-term, multi-disciplinary biomedical research programs, and the development of essential research resources for more than 30,000 scientists. The NCRR gives priority to those resources and projects that are critical to the research enterprise and without which the national biomedical community could not achieve its full potential or harness innovation to advance human health. The Center evaluates investigator-initiated grant applications for all large programs, conducts a scientific review of NCRR grant applications, and presents the results to the NCRR Advisory Council for review. NCRR will continue to support new investigators and to maintain an adequate number of competing Research Project Grants.

Funds are included in R&D contracts to support several trans-NIH initiatives, such as the Therapies for Rare and Neglected Diseases program (TRND), the Basic Behavioral and Social Sciences Opportunity Network (OppNet), and support for a new synchrotron at the Brookhaven National Laboratory, as well as increased support for other HHS agencies through the program evaluation set-aside.

#### Justification of the FY 2011 Budget by Activity Detail

#### **Program Descriptions and Accomplishments**

**Division for Clinical Research Resources:** This division funds biomedical research institutions to establish and maintain specialized clinical research facilities and to train the clinical researchers of tomorrow. It is leading NIH efforts to create a new integrated discipline of clinical and translational sciences through the Clinical and Translational Science Awards (CTSA) program. The division also supports Science Education Partnership Awards, which enhance the public's understanding of biomedical research. Additionally, the division supports, in cooperation with other NIH ICs, the availability of human tissues for use in biomedical research. In FY 2009, the division's primary focus was the expansion of the CTSA consortium to include 46 CTSAs, so that the program's goal of 60 CTSAs by FY 2011 is reached. One of the many CTSA activities sponsored in 2009 included a workshop on clinical research management held in June. The goal of the workshop was to develop a system of metrics to apply to the processing of research protocols and it focused on institutional review board processes, contract processes, and quality improvement. The workshop included representatives from 38 CTSAs, 15 NIH ICs, and the pharmaceutical industry.

**Budget Policy**: The FY 2011 budget estimate for the Division for Clinical Research is \$526.472 million, an increase of \$11.734 million or 2.3 percent over the FY 2010 enacted level. The FY 2011 request includes an additional \$20.000 million for new Clinical and Translational Science Awards, which encompass linked career development and research training awards, as well as General Clinical Research Centers. To accommodate the additional investment in the CTSA program, funds realized from General Clinical Research Centers transitioning to CTSAs will be redirected to the CTSAs, and funding for General Clinical Research Resources activities will be decreased.

Clinical and Translational Science Awards (CTSAs)/General Clinical Research Centers (GCRCs): Working together as a national consortium, the CTSA institutions are disseminating clinical research informatics tools, forging new partnerships with health care organizations, and expanding outreach to minority and medically underserved communities. By enhancing clinical research informatics, and communications, data processing will be improved, helping to speed the interpretation of results from clinical trials. Importantly, CTSAs are training the next generation of clinical and translational researchers, including physicians, basic laboratory investigators, and nurses, in a multidisciplinary environment. Each CTSA serves as an institutional academic home for all types of clinical and translational research. In FY 2009, NIH funded eight additional CTSAs, expanding the consortium to include 46 medical research institutions. Through CTSA solicitations, medical research institutions, including those with GCRCs, will have the opportunity to build on their existing resources and transform into this integrated program. In FY 2009, the program facilitated vital support for workforce

development, consortium-wide strategic goals, and pilot projects was provided. Importantly, the CTSA consortium serves as a communications hub that ensures sharing among sites and accelerates adoption of best practices for clinical and translational research. The consortium continues to make progress towards accomplishing its national priorities: 1) to develop strategies and resources to move laboratory discoveries into early clinical testing (T1 translation), 2) to reduce complexities and improve ways clinical and translational research is conducted, 3) to enhance training and career development of clinical and translational investigators, 4) to encourage consortium-wide collaborations, and 5) to improve the health of communities across the nation.

**Budget Policy**: FY 2011 NIH funding for the combined CTSA and GCRC programs is \$500.403 million: \$477.700 million provided by NCRR and \$22.703 million provided by the NIH Common Fund/Roadmap for Medical Research. The funding support provided by NCRR reflects an increase of \$20.000 million or 4.4 percent over the FY 2010 enacted level while the NIH Common Fund/Roadmap for Medical Research contribution reflects a decrease of \$2.542 million or 10.1 percent from the FY 2010 enacted level. (More information on the NIH Common Fund/Roadmap is provided in Volume One – Overview).

In FY 2011, the CTSA program will be fully implemented with a projected 60 CTSAs. This budget supports existing and new CTSAs, and includes funding that has been transitioned into the CTSAs from the GCRCs, as well as funding that has been incorporated into the CTSAs for existing training and career development grants. In addition, the FY 2011 budget will fund the second year of K30 Clinical Research Curriculum Awards for those institutions that do not have K30 activities supported through a CTSA, as well as support National Institute of General Medical Sciences' Pharmacogenetics Research Network (PGRN) fellows to promote interaction with the CTSAs.

## Portrait of a Program: Clinical and Translational Science Awards – Streamlining Clinical Research Management to Speed Study Start-up

FY 2010 Level: \$ 500.403 million FY 2011 Level: \$ 500.000 million Change: \$ -\$ 0.403 million

The Clinical and Translational Science Award (CTSA) consortium has identified five strategic goals to guide its national research agenda. Researchers working on one of those goals, building a national clinical and translational research capability, are making strides in reducing the time it takes to implement a clinical trial and begin enrolling participants. The CTSA consortium is helping streamline the review and approval processes related to study initiation, while still ensuring compliance with institutional and governmental regulations, especially those that protect study participants.

Across the consortium, the CTSAs are sharing lessons learned and working to develop standards for clinical research management. They are targeting administrative processing delays that can be reduced or eliminated and identifying "champions of change" within individual CTSA institutions to improve their review and approval processes by adopting processes that have worked for other CTSA sites. As the consortium continues to facilitate the adoption of best practices in clinical research management, it expects to further reduce the time it takes to initiate new clinical trials.

Already, their clinical research management efforts have reduced internal review process times at several CTSAs. For example, within the academic homes for clinical and translational science created by the CTSA program, researchers quickly mobilized to implement clinical trials for the 2009 H1N1 influenza vaccine. In support of the National Institute of Allergy and Infectious Diseases Vaccine and Treatment Evaluation Units, several CTSA sites rapidly allocated clinical resources for the trials and promptly conducted institutional review board meetings to approve vaccine trial protocols. Additionally, CTSA staff swiftly put in place the research contracts needed to support the effort. The efficiencies derived from the CTSA efforts to streamline clinical research management facilitated the speed at which these sites were able to implement the vaccine trials and begin recruiting study participants.

Clinical Research Resources- General: NCRR funds specialized support programs and initiatives that provide clinical researchers with the facilities and resources they need to conduct patient-oriented research and clinical trials. Researchers using these facilities and resources are studying diseases such as diabetes, cancer, HIV/AIDS, heart disease, cystic fibrosis, and multiple sclerosis.

In FY 2009, NCRR supported an investigation to determine whether reduced insulin sensitivity and other age-related dysfunctions are inevitable consequences of aging, or secondary to physical inactivity. The study included 42 healthy sedentary and endurance-trained young (18-30 years old) and older (59-76 years old) subjects. The results demonstrated that reduced insulin sensitivity is likely related to changes in body fat percentages and physical inactivity rather than being an inevitable consequence of aging.

Budget Policy: The FY 2011 budget estimate for the Clinical Research Resources – General program is \$29.898 million, a decrease of \$8.816 million or 22.8 percent below the FY 2010 enacted level. To maximize its investments in clinical research, NCRR has linked a number of the programs described above with the CTSA program, such as training and research career awards that will be integrated under the umbrella of CTSAs. To sustain the increased investment in the CTSA program, NCRR ended support for a number of Centers programs. Other I/Cs have assumed responsibility for these programs and the resources provided by these Centers are available through other NIH-funded programs. In addition, NCRR's Clinical Research Resources program will no longer contribute to the Biomedical Informatics Research Network (BIRN), and will not award any new research career training awards outside of the CTSA program.

Science Education Partnership Award (SEPA) Program: The goals of the SEPA program are to 1) increase the pipeline of future scientists and clinicians, especially from minority, underserved, and rural kindergarten to grade 12 (K-12) students and 2) to engage and educate the general public on the health-related advances made possible by NIH-funded research. By creating relationships among educators, museum curators, and medical researchers, SEPA encourages the development of hands-on, inquiry-based curricula that inform participants about such timely issues as obesity, stem cells, and infectious diseases. In addition, SEPA provides professional development for teachers and mentoring opportunities for students.

In FY 2009, NCRR funded 16 new SEPAs, 13 for K-12 students and 3 science center/museum projects, to engage students and the public in health sciences. This round of new awards brings the SEPA portfolio to 65 active grants. The program continues its emphasis on rural and underserved populations with 18 out of the 23 Institutional Development Award (IDeA) states and Puerto Rico receiving current SEPA funding.

<u>Budget Policy</u>: The FY 2011 budget estimate for the SEPA program is \$18.874 million, an increase of \$0.550 million or 3.0 percent over the FY 2010 enacted level. In November 2008, the NIH Council of Public Representatives—the formal mechanism at NIH for public input into the research decision-making and priority-setting process, recognized SEPA as the science education resource for K-12 and the general public. In FY 2011, NCRR will continue to develop our outreach efforts to expand the benefits of the SEPA program to other NCRR programs such as IDeA, RCMI, and CTSAs. These

efforts include informing high schools about opportunities to participate in SEPA, and Encouraging science museums, which reach a wide audience, to educate the public in the benefits of NIH-supported research.

**Division of Biomedical Technology**: This division supports the development of a broad spectrum of technologies, techniques, and methods through 50 Biomedical Technology Research Centers (BTRCs) at academic and other research institutions nationwide. The BTRCs develop versatile new technologies and methods that help researchers who are studying virtually every human disease, each creating innovative technologies in one of five broad areas: informatics and computation, optics and spectroscopy, imaging, structural biology, and systems biology. They are complemented by programs providing research project grants to individual investigators and small businesses, often focusing on high risk, high reward technological innovation.

In FY 2009, the BTRCs, which are located in 20 states, were used by nearly 7,500 scientists from across the United States and beyond, representing over \$1.500 billion of NIH funding from 20 Institutes and Centers.

**Budget Policy**: The FY 2011 budget estimate for the Division of Biomedical Technology is \$224.262 million, an increase of \$10.063 million or 4.7 percent over the FY 2010 enacted level. Program activities will focus on expanding and ensuring the development of technologies to support translational research, developing affordable and flexible technologies that can be applied to translational research, and developing additional areas of expertise and knowledge, especially at the crossroads of mathematics, physics, and medicine. In FY 2009, Scientists at Boston University's Cancer Research Center and NCRR-supported Center for Biomedical Mass Spectrometry were in the process of developing improved diagnostic tools for lymphoma by correlating patterns of protein expression unique to malignancy. Non-Hodgkins lymphomas are particularly diverse and difficult to assess histologically. Development of panels of molecular markers for specific diseases are highly sought after in order to speed diagnosis and improve treatment. Technological advances in NCRR's proteomics centers are bringing us closer to making this vision of personalized medicine a reality. This Division also manages the Center's \$37.397 million Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs, which seek to increase federally-supported small business research and development participation and private-sector commercialization of technology.

Shared Instrumentation (SIG) and High-End Instrumentation (HEI) Grant Programs: The goal of these programs is to provide new generation technologies to NIH-supported investigators for a broad array of basic, translational, and clinical research. The Shared Instrumentation program funds equipment in the \$100-\$600 thousand range and the High-End Instrumentation program funds instrumentation in the \$750 thousand - \$2 million range. To increase cost effectiveness of the programs, instruments are placed in core facilities where they benefit a large community of NIH researchers. Research tools funded through these programs enable researchers to make breakthroughs in biomedical research.

## NCRR Instrumentation Program (dollars in millions)

	FY 2009	9 Actual	FY 2010	Enacted	FY 20	11 PB
	#	\$	#	\$	#	\$
	Awards	Amount	Awards	Amount	Awards	Amount
Shared	103	\$ 42.046	105	\$ 42.390	105	\$ 43.662
Instrumentation		<b>4</b> 04 00=	4.0	<b>A A A A A B A</b>	4.0	<b>A A A A A A A A A B A B A B B B B B B B B B B</b>
High-End	14	\$ 21.665	13	\$ 21.838	13	\$ 22.493
Instrumentation						
Total –	117	\$ 63.711	118	\$ 64.228	118	\$ 66.155
Instrumentation						
Program						

**Budget Policy**: The FY 2011 budget estimate for the Shared Instrumentation/High-End Instrumentation grant programs is \$66.155 million, an increase of \$1.927 million or 3.0 percent over the FY 2010 enacted level. These one-year awards help NIH-supported investigators acquire expensive, commercially available equipment, which is typically too costly to obtain through a research project grant. To optimize the use of Federal funds, instrumentation purchased with a Shared Instrumentation or High-End Instrumentation award must be shared by at least three NIH-supported scientists.

**Division of Comparative Medicine:** This division provides scientists with essential resources—including specialized laboratory animals, research facilities, training, and other tools—that enable health-related discoveries. Animal models are a critical part of the biomedical research continuum to bridge the gap between basic science and human medicine. Discoveries in one species enhance the understanding of other species. Because many diseases need to be studied in living organisms, researchers have developed animal models, which mimic human conditions. In fact, virtually every major medical advance of the last century resulted from research involving animal models.

**Budget Policy**: The FY 2011 budget estimate for the Division of Comparative Medicine is \$203.684 million, an increase of \$6.766 million or 3.4 percent over the FY 2010 enacted level.

National Primate Research Centers (NPRCs): The major goal of the NPRC program is to facilitate the use of nonhuman primates (NHPs) as models of human health and disease for basic, translational, and clinical biomedical research. It provides animals, facilities, and expertise in all aspects of NHP biology and husbandry through funding to eight institutions. It is neither cost effective nor feasible to reproduce these specialized facilities and expertise at every research institution, so the NPRCs are a valuable resource to the research community. Major areas of research benefiting from the resources of the NPRCs include AIDS, avian flu, Alzheimer's disease, Parkinson's disease, diabetes, asthma, and endometriosis.

In FY 2009, high throughput sequencing technologies were used to characterize the microbial populations of NHP models in various conditions such as AIDS, metabolic syndrome and heart disease. These studies will relate pathogen status to specific disease states and will examine the extent to which diet-related differences in the microbiome are related to risk factors for common conditions such as diabetes and obesity. To facilitate these studies, the NPRCs house 26,000 NHPs, 70 percent of which are rhesus monkeys, the most widely used NHP for HIV research and translational studies. The NCRR funded NPRC initiatives to enhance consortium-based activities among the NPRCs in the areas of informatics, colony management and genetics.

**Budget Policy**: The FY 2011 budget estimate for the NPRC program is \$86.412 million, an increase \$2.517 million or 3.0% over the FY 2010 enacted level. The program's highest funding priority will be to maintain the breadth of activities supported by the program. The NCRR and NPRCs will continue to work together to determine specific ways in which consortium-based activities can be enhanced to make more efficient use of existing funding. Topics covered by specific working groups include colony management, training, genetics and genome banking, among others. Another activity of the NPRCs is working with the CTSA consortium to help clinical researchers increase their knowledge of and access to animal models, such as nonhuman primates.

Comparative Medicine – General: NCRR funds research to create, develop, characterize, preserve, and study a broad array of high-quality animal models and biological materials, such as cell cultures. This funding also supports research to safeguard the health and welfare of laboratory animals and provides career development opportunities in specialized areas of translational science. By utilizing non-mammalian models, such as fish, worms, and fruit flies, investigators are able to advance the understanding of gene function, protein interactions, and disease processes related to humans. The mouse model and other genetically-altered animals provide opportunities for preclinical testing and the development of therapies for genetic disorders.

# Portrait of a Program: Biomedical Technology Research Centers - Translating Advances in Imaging to Improve Clinical Care

FY 2010 Level: \$ 81.000 million FY 2011 Level: \$ 83.000 million Change: +\$ 2.000 million

Moving technological advances from the research setting into clinical application is one of the strengths of the NCRR-supported Biomedical Technology Research Centers (BTRCs). This is exemplified by a pair of recent advances by the Resource for Magnetic Resonance and Optical Imaging at the University of Pennsylvania. BTRC-supported researchers developed two new magnetic resonance imaging (MRI) modalities to advance research and clinical care.

Dynamic contrast enhanced MRI is currently being used in a clinical trial studying treatment response in patients with metastatic colorectal cancer. This technology enables non-invasive assessment of the vascular effects of targeted biologic cancer treatments. It has been used successfully to grade tumor vascularity and predict clinical response in a variety of tumors.

A second new MRI modality characterizes changes associated with intervertebral disc degeneration. Degenerative disc disease contributes to lower back pain, which is a major cause of disability and source of health care costs. Improved methods of diagnosing early degeneration will help guide new treatments for degenerative disc disease.

Researchers from the University of Pennsylvania imaging BTRC work closely with clinicians, including those at the University's CTSA, to promote ready access to imaging tools that provide new insights into disease and improve the care that study participants and patients receive.

**Budget Policy**: The FY 2011 budget estimate for the Comparative Medicine – General Program is \$117.272 million, an increase of \$4.249 million or 3.8 percent over the FY 2010 enacted level. The Division will continue funding for the KOMP Repository and the Ruth L. Kirschstein National Research Service Awards (NRSA), where NCRR plans to support approximately 135 full-time training positions.

Increasing the number of qualified research veterinarians and ensuring that veterinarians are recognized partners on translational research teams is a FY 2011 priority. NCRR will sponsor career development programs that attract and train graduate veterinarians in such specialties as primate clinical medicine, laboratory animal medicine, and rodent pathology. Through interactions with its NIH partners and scientific community, NCRR's Division of Comparative Medicine plans to maintain scientific priorities that best meet the broad needs of the multidisciplinary biomedical research

community. To facilitate research supporting translation of laboratory discoveries into clinical applications, NCRR is developing a new electronic directory of existing animal models resources to provide access to centralized information derived from pre-clinical disease models. This resource will link relevant model features to appropriate human conditions to facilitate the discovery of new interactions, connections and relationships between models and diseases. Finally, continued enhancement of activities related to cryopreservation of animal germplasm and related technologies remains a major goal of the Division's efforts.

**Division of Research Infrastructure**: Developing and invigorating the nation's research capacity and infrastructure at all stages of research—from basic discoveries in the laboratory to advanced treatments for patients, particularly in underserved communities—is the goal of this division. Its programs provide research opportunities for junior investigators, enhance the caliber of scientific faculty, and increase the number of competitive investigators from minority and underserved communities. Additionally, the division continues to monitor grants previously made to modernize and construct research facilities that support basic and/or clinical investigations.

<u>Budget Policy</u>: The FY 2011 budget estimate for the Division of Research Infrastructure is \$316.217 million, an increase of \$9.834 million or 3.2 percent over the FY 2010 enacted level.

Research Centers in Minority Institutions (RCMI): The goal of the program is to develop and enhance the research infrastructure of minority institutions to expand their capacity for conducting basic, translational, and clinical research. It provides grants to institutions that award doctoral degrees in health-related fields and have student populations that are 50 percent or greater African American, Hispanic, American Indian, Alaska Native, or Pacific Islander. It funds grants to 18 minority institutions in ten states, the District of Columbia, and Puerto Rico and provides a wide array of research resources to enhance institutional infrastructure, ranging from state-of-the-art instrumentation to outpatient clinical research facilities. Research areas supported by the RCMI program include health disparities, HIV/AIDS, cardiovascular disease, cancer, diabetes, obesity, and Alzheimer's and Parkinson's disease.

In FY 2009, NCRR supported a new initiative, Translating Basic Science into New and Better Treatments for HIV/AIDS. The AIDS pandemic has proven to be one of the most significant challenges faced by the biomedical research community, and AIDS has become a major problem for people of color, both globally and in the United States. The NCRR-funded Center for AIDS Health Disparities Research (CAHDR) at Meharry Medical College is engaged in research to understand the biological basis for HIV/AIDS disparities among racial and ethnic groups. The overall mission is to develop interventions that would help eliminate the disparities, and benefit all people at risk of HIV/AIDS.

**Budget Policy**: The FY 2011 budget estimate for the RCMI program is \$60.520 million, an increase of \$1.763 million or 3.0 percent over the FY 2010 enacted level. The program's highest funding priority will be to sustain the range of activities supported by the program, including improving network connectivity through the RCMI Translational Research Network (RTRN). The RTRN promotes interdisciplinary interactions and collaborations with the biomedical community to facilitate translational research in health disparities. By allowing RCMI Centers to pool resources and expertise in collaborative, multi-center research, the network will serve as a foundation to increase the competitiveness of RCMI grantees when applying for other grants.

Institutional Development Award (IDeA): This program fosters health-related research and increases the competitiveness of investigators at institutions in 23 states and Puerto Rico with historically low aggregate success rates for grant awards from the NIH. The two major initiatives of the IDeA program are IDeA Networks of Biomedical Research Excellence (INBRE) and Centers of Biomedical Research Excellence (COBRE). INBREs establish a multi-disciplinary research network that strengthens the lead and partner institutions' biomedical research expertise and infrastructure while providing research support to faculty and students including those from community and tribal colleges. COBREs support thematic multidisciplinary centers that strengthen institutional research capacity by expanding and developing biomedical faculty capability and enhancing research infrastructure that encompasses the full spectrum of the basic and clinical sciences.

The 2009 INBRE Principal Investigator meeting held in Bethesda, MD, and other major regional IDeA meetings in New Hampshire, Montana, and South Carolina, featured panel discussions with IDeA and CTSA leaders intended to stimulate and inform IDeA-CTSA collaborations and partnerships.

<u>Budget Policy</u>: The FY 2011 budget estimate for the IDeA program is \$235.728 million, an increase of \$6.866 million or 3.0 percent over the FY 2010 enacted level. This budget will support existing, new, and re-competing INBRE and COBRE awards. NCRR will continue its commitment to COBREs to ensure growth through the promotion of collaborative and interactive efforts among researches with complementary backgrounds, skills, and expertise. INBRE awards, most of which are on a 5-year cycle, re-competed in FY 2009. The new INBRE grants will further develop the caliber of scientific faculty at research institutions and undergraduate schools and attract more promising students to these organizations.

Portrait of a Program: Institutional Development Award - Networks of Biomedical Research Excellence and Science Education Partnership Awards - Connecting Students with the Biomedical Research Career Pipeline

FY 2010 Level: \$ 91.560 million FY 2011 Level: \$ 94.307 million Change: +\$ 2.747 million

Two NCRR programs are helping to build a biomedical research career pipeline for students in West Virginia. The Science Education Partnership Award (SEPA) program supports hands-on, inquiry-based curricula to encourage K-12 students to consider careers in biomedical science. The Institutional Development Award Networks of Biomedical Research Excellence (INBRE) program supports multi-disciplinary research networks that increase the research opportunities for undergraduate and graduate students and faculty.

Funding from SEPA supports West Virginia's Health Sciences and Technology Academy (HSTA), which engages high school students, many of whom are from minority or rural communities, in research projects. Currently, HSTA students are learning about clinical trials focused on diabetes, nutrition and exercise.

Building upon HSTA's success of igniting student's interest in science and research, funding from the INBRE program will provide additional opportunities for those students to pursue their interest in biomedical research at undergraduate programs in the INBRE network. The programs will work together to provide a seamless pipeline for students to actively participate in the biomedical research programs in place at the INBRE-funded institutions. The interface between the two programs will also enable INBRE researchers to work directly with the HSTA students while they are in high school, providing excellent mentoring opportunities.

By working together, the HSTA and INBRE programs plan to encourage more underrepresented students from the Appalachian region to pursue a college education, improve science and math skills, and consider a biomedical research career. Ultimately, these programs will contribute to training the next generation of researchers and health care providers for West Virginia's underserved rural communities.

Research Infrastructure – General: Funding for these programs increases the competitiveness of investigators in underserved states and institutions and enhances research capacity. One of these programs, the Clinical Research Education and Career Development (CRECD) in Minority Institutions program, trains clinical and translational investigators at minority institutions to conduct sound clinical research and be competitive in obtaining external research support. Another program, the Animal Facilities Improvement Program, upgrades animal facilities, improves research animal

care, and assists institutions in complying with the regulations and policies related to the use of laboratory animals.

**Budget Policy**: The FY 2011 budget estimate for the Research Infrastructure – General Program is \$19.969 million, an increase of \$1.205 million or 6.4 percent over the FY 2010 enacted level. NCRR will continue to provide support to institutions for alterations and renovations to improve laboratory animal facilities and to purchase equipment for animal resources, diagnostic laboratories, transgenic animal resources, and similar activities.

**Research Management and Support:** The NCRR RMS activities provide administrative, budgetary, logistical, and scientific support in the review, award, and monitoring of research grants, training awards, and research and development contracts.

**<u>Budget Policy</u>**: In FY 2011, NCRR's request provides \$38.106 million for RMS, an increase of \$1.825 million or 5.0 percent from the FY 2010 enacted level. These resources will be used to support the above activities and to promote sound stewardship of our resources by effectively leveraging technology.

**Common Fund/Roadmap**: The NCRR is the lead Institute/Center for the following Roadmap for Medical Research initiatives supported through the NIH Common Fund: National Technology Centers and Metabolomics Development, and Clinical and Translational Science Awards. Both of these activities will continue in FY 2011.

#### **Program Portrait: Recovery Act Implementation**

Recovery Act Funding: \$1.610 billion

In FY 2009, NCRR received \$1.610 billion under the Recovery Act. Of this amount, \$0.345 billion was obligated in FY 2009 and \$1.265 billion will be obligated in FY 2010. These funds support grant awards in three main areas: extramural construction (\$1.000 billion), shared instrumentation (\$0.300 billion), and scientific research (\$0.310 billion).

Extramural construction grants support the construction, repair, and renovation of research facilities, which spurs economic growth through new job creation in a multitude of sectors, and provides state-of-the-art scientific environments that can help advance preventions, treatments and cures for disease. Extramural construction awards also support the upgrading of core facilities, which is a centralized shared resource that provides access to instruments or technologies or services, as well as expert consultation to investigators supported by the core. The majority of the extramural construction grants are expected to be awarded by March 2010.

Shared instrumentation grants provide for the acquisition or updating of expensive shared-use instrumentation not generally available through other NIH award mechanisms. These awards provide a cost-effective mechanism for groups of NIH-supported investigators to obtain commercially-available, technologically sophisticated equipment costing more than \$100 thousand.

Scientific research grants are being used to support administrative supplements to existing awards to accelerate the pace and achievement of scientific research. These supplements are also being used to support summer research experiences for students and science educators. Other types of scientific research awards are enabling the national networking of scientists and resources, as well as competitive revisions to existing grants to leverage the resources, expertise, and infrastructure of the NCRR centers and center-like programs.

**Budget Authority by Object** 

Enacted PB   Decrease   Chang Total compensable workyears:	Budget Autilo	rity by Object		T	
Full-time employment	Tatal appearance his words appear		_		Percent Change
Average GM/GS grade	Full-time employment				4.2 0.0
Average salary, grade established by act of July 1, 1944 (42 U.S.C. 207)					2.0 0.0
Average salary of ungraded positions	Average salary, grade established by act of		\$110,454	\$2,166	2.0
Personnel Compensation:			· ·	· ·	0.0 0.0
11.1   Full-time permanent	OBJECT CLASSES				Percent Change
11.3         Other than full-time permanent         1,217,000         1,289,000         72,000         5.5           11.5         Other personnel compensation         701,000         742,000         41,000         5.5           11.7         Military personnel         337,000         357,000         20,000         5.5           11.8         Special personnel services payments         0         0         0         0           12.0         Personnel benefits         3,322,000         3,518,000         196,000         5.1           12.0         Personnel benefits         334,000         354,000         20,000         6.1           12.1         Military personnel benefits         334,000         354,000         20,000         6.1           13.0         Benefits for former personnel         0         0         0         0         0           13.0         Benefits for former personnel         0         0         0         0         0         0           13.0         Transportation of things         71,779,000         18,828,000         1,049,000         5.2         21.0         Transportation of things         71,000         74,000         3,000         4.2         22.1         Transportation of things         71,000 </td <td></td> <td></td> <td><b>*</b> * * * * * * * * * * * * * * * * * *</td> <td>4</td> <td></td>			<b>*</b> * * * * * * * * * * * * * * * * * *	4	
11.5         Other personnel compensation         701,000         742,000         41,000         5.1           11.8         Special personnel services payments         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 <td< td=""><td>· ·</td><td></td><td></td><td></td><td></td></td<>	· ·				
11.7 Military personnel         337,000         357,000         20,000         5.5           11.8 Special personnel services payments         0         0         0         0         0         0           12.0 Personnel benefits         3,322,000         3,518,000         196,000         5.5           12.2 Military personnel benefits         334,000         354,000         20,000         6.1           13.0 Benefits for former personnel         0         0         0         0         0         0           13.0 Benefits for former personnel         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0	· ·				
11.8   Special personnel services payments			•		5.9
Total, Personnel Compensation					0.0
12.0 Personnel benefits         3,322,000         3,518,000         20,000         5.1           12.2 Military personnel benefits         334,000         354,000         20,000         6.6           13.0 Benefits for former personnel         0         0         0         0         0           Subtotal, Pay Costs         17,779,000         18,828,000         1,049,000         5.2           21.0 Travel and transportation of persons         553,000         579,000         26,000         4.2           22.0 Transportation of things         71,000         74,000         3,000         4.2           23.1 Rental payments to GSA         0         0         0         0         0           23.2 Rental payments to others         7,000         7,000         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0		14,123,000	14,956,000	833,000	5.9
13.0   Benefits for former personnel   0					5.9
Subtotal, Pay Costs	12.2 Military personnel benefits	334,000		20,000	6.0
21.0   Travel and transportation of persons   553,000   579,000   26,000   4.					0.0
22.0 Transportation of things         71,000         74,000         3,000         4.3           23.1 Rental payments to GSA         0         0         0         0           23.2 Rental payments to others         7,000         7,000         0         0           23.3 Communications, utilities and miscellaneous charges         198,000         207,000         9,000         4.3           24.0 Printing and reproduction         163,000         172,000         9,000         5.2           25.1 Consulting services         7,688,000         8,206,000         517,000         6.3           25.2 Other services         10,026,000         10,600,000         574,000         5.3           25.3 Purchase of goods and services from government accounts         46,751,000         48,982,000         2,231,000         4.3           25.4 Operation and maintenance of facilities         434,000         454,000         20,000         4.4           25.5 Research and development contracts         12,926,000         14,455,000         1,529,000         11.3           25.6 Medical care         0         0         0         0         0         0           25.7 Operation and maintenance of equipment         25,000         26,000         1,000         4.4           25.8 Subs	, ,				5.9
23.1 Rental payments to GSA         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0<					4.7
23.2   Rental payments to others   7,000   7,000   0   0.00			· ·	•	
23.3 Communications, utilities and miscellaneous charges   198,000   207,000   9,000   4.5		-	_		
miscellaneous charges         198,000         207,000         9,000         4.8           24.0 Printing and reproduction         163,000         172,000         9,000         5.8           25.1 Consulting services         7,689,000         8,206,000         517,000         6.3           25.2 Other services         10,026,000         10,600,000         574,000         5.3           25.3 Purchase of goods and services from government accounts         46,751,000         48,982,000         2,231,000         4.8           25.4 Operation and maintenance of facilities         434,000         454,000         20,000         4.8           25.5 Research and development contracts         12,926,000         14,455,000         1,529,000         11.8           25.6 Medical care         0         0         0         0         0         0           25.7 Operation and maintenance of equipment         25,000         26,000         1,000         4.8           25.8 Subsistence and support of persons         0         0         0         0         0           25.0 Subtotal, Other Contractual Services         77,851,000         82,723,000         4,872,000         6.3           26.0 Supplies and materials         140,000         147,000         7,000         5.0		7,000	7,000		0.0
24.0 Printing and reproduction       163,000       172,000       9,000       5.3         25.1 Consulting services       7,689,000       8,206,000       517,000       6.3         25.2 Other services       10,026,000       10,600,000       574,000       5.3         25.3 Purchase of goods and services from government accounts       46,751,000       48,982,000       2,231,000       4.4         25.4 Operation and maintenance of facilities       434,000       454,000       20,000       4.6         25.5 Research and development contracts       12,926,000       14,455,000       1,529,000       11.3         25.6 Medical care       0       0       0       0       0         25.7 Operation and maintenance of equipment       25,000       26,000       1,000       4.4         25.8 Subsistence and support of persons       0       0       0       0       0         25.0 Subtotal, Other Contractual Services       77,851,000       82,723,000       4,872,000       6.3         26.0 Supplies and materials       140,000       147,000       7,000       5.0         31.0 Equipment       1,223,000       1,281,000       58,000       4.3         32.0 Land and structures       0       0       0       0       0	· ·	198.000	207.000	9.000	4.5
25.1 Consulting services       7,689,000       8,206,000       517,000       6.3         25.2 Other services       10,026,000       10,600,000       574,000       5.3         25.3 Purchase of goods and services from government accounts       46,751,000       48,982,000       2,231,000       4.8         25.4 Operation and maintenance of facilities       434,000       454,000       20,000       4.6         25.5 Research and development contracts       12,926,000       14,455,000       1,529,000       11.8         25.6 Medical care       0       0       0       0       0       0         25.7 Operation and maintenance of equipment       25,000       26,000       1,000       4.6       4.6       4.6       4.6       4.6       4.6       4.6       4.6       6.6       4.6       4.6       4.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6       6.6 <t< td=""><td></td><td></td><td></td><td></td><td>5.5</td></t<>					5.5
25.3       Purchase of goods and services from government accounts       46,751,000       48,982,000       2,231,000       4.8         25.4       Operation and maintenance of facilities       434,000       454,000       20,000       4.8         25.5       Research and development contracts       12,926,000       14,455,000       1,529,000       11.8         25.6       Medical care       0       0       0       0       0         25.7       Operation and maintenance of equipment       25,000       26,000       1,000       4.6         25.8       Subsistence and support of persons       0       0       0       0       0         25.0       Subtotal, Other Contractual Services       77,851,000       82,723,000       4,872,000       6.3         26.0       Supplies and materials       140,000       147,000       7,000       5.0         31.0       Equipment       1,223,000       1,281,000       58,000       4.3         32.0       Land and structures       0       0       0       0       0         33.0       Investments and loans       0       0       0       0       0         41.0       Grants, subsidies and contributions       1,170,534,000       1,204,723,000<					6.7
government accounts         46,751,000         48,982,000         2,231,000         4.8           25.4 Operation and maintenance of facilities         434,000         454,000         20,000         4.8           25.5 Research and development contracts         12,926,000         14,455,000         1,529,000         11.8           25.6 Medical care         0         0         0         0         0         0           25.7 Operation and maintenance of equipment         25,000         26,000         1,000         4.6           25.8 Subsistence and support of persons         0         0         0         0         0           25.0 Subtotal, Other Contractual Services         77,851,000         82,723,000         4,872,000         6.3           26.0 Supplies and materials         140,000         147,000         7,000         5.0           31.0 Equipment         1,223,000         1,281,000         58,000         4.3           32.0 Land and structures         0         0         0         0         0           33.0 Investments and loans         0         0         0         0         0         0           41.0 Grants, subsidies and contributions         1,170,534,000         1,204,723,000         34,189,000         2.8      <		10,026,000	10,600,000	574,000	5.7
25.4 Operation and maintenance of facilities       434,000       454,000       20,000       4.6         25.5 Research and development contracts       12,926,000       14,455,000       1,529,000       11.8         25.6 Medical care       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0        0       0       0       0       0       0       0       0       0       0       0       0       0       0       0        0       0       0       0       0       0       0       0       0       0       0       0       0       0       0        0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0					
25.5       Research and development contracts       12,926,000       14,455,000       1,529,000       11.3         25.6       Medical care       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0        0       0       0       0       0       0       0       0       0       0       0       0       0       0       0					4.8
25.6       Medical care       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0        0       0       0       0       0       0       0       0       0       0       0       0       0       0       0        0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0					
25.7 Operation and maintenance of equipment       25,000       26,000       1,000       4.0         25.8 Subsistence and support of persons       0       0       0       0       0         25.0 Subtotal, Other Contractual Services       77,851,000       82,723,000       4,872,000       6.3         26.0 Supplies and materials       140,000       147,000       7,000       5.0         31.0 Equipment       1,223,000       1,281,000       58,000       4.1         32.0 Land and structures       0       0       0       0         33.0 Investments and loans       0       0       0       0         41.0 Grants, subsidies and contributions       1,170,534,000       1,204,723,000       34,189,000       2.5         42.0 Insurance claims and indemnities       0       0       0       0       0         43.0 Interest and dividends       0       0       0       0       0         44.0 Refunds       0       0       0       0       0         Subtotal, Non-Pay Costs       1,250,740,000       1,289,913,000       39,173,000       3.6	The state of the s				0.0
25.8         Subsistence and support of persons         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         6.3         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0         25.0					4.0
26.0       Supplies and materials       140,000       147,000       7,000       5.0         31.0       Equipment       1,223,000       1,281,000       58,000       4.1         32.0       Land and structures       0       0       0       0         33.0       Investments and loans       0       0       0       0         41.0       Grants, subsidies and contributions       1,170,534,000       1,204,723,000       34,189,000       2.5         42.0       Insurance claims and indemnities       0       0       0       0         43.0       Interest and dividends       0       0       0       0         44.0       Refunds       0       0       0       0         Subtotal, Non-Pay Costs       1,250,740,000       1,289,913,000       39,173,000       3.2		_	· _	_	0.0
31.0 Equipment       1,223,000       1,281,000       58,000       4.0         32.0 Land and structures       0       0       0       0.0         33.0 Investments and loans       0       0       0       0.0         41.0 Grants, subsidies and contributions       1,170,534,000       1,204,723,000       34,189,000       2.9         42.0 Insurance claims and indemnities       0       0       0       0.0         43.0 Interest and dividends       0       0       0       0.0         44.0 Refunds       0       0       0       0.0         Subtotal, Non-Pay Costs       1,250,740,000       1,289,913,000       39,173,000       3.6	25.0 Subtotal, Other Contractual Services	77,851,000	82,723,000	4,872,000	6.3
32.0 Land and structures       0       0       0       0         33.0 Investments and loans       0       0       0       0         41.0 Grants, subsidies and contributions       1,170,534,000       1,204,723,000       34,189,000       2.9         42.0 Insurance claims and indemnities       0       0       0       0         43.0 Interest and dividends       0       0       0       0         44.0 Refunds       0       0       0       0         Subtotal, Non-Pay Costs       1,250,740,000       1,289,913,000       39,173,000       3.6	l ' '	140,000	147,000	7,000	5.0
33.0 Investments and loans       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       2.9       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0 <td< td=""><td></td><td>1,223,000</td><td>1,281,000</td><td>58,000</td><td>4.7</td></td<>		1,223,000	1,281,000	58,000	4.7
41.0 Grants, subsidies and contributions       1,170,534,000       1,204,723,000       34,189,000       2.9         42.0 Insurance claims and indemnities       0       0       0       0         43.0 Interest and dividends       0       0       0       0         44.0 Refunds       0       0       0       0         Subtotal, Non-Pay Costs       1,250,740,000       1,289,913,000       39,173,000       3.3			_		0.0
42.0 Insurance claims and indemnities       0       0       0.0         43.0 Interest and dividends       0       0       0       0.0         44.0 Refunds       0       0       0       0       0.0         Subtotal, Non-Pay Costs       1,250,740,000       1,289,913,000       39,173,000       3.0		-	_		0.0
43.0 Interest and dividends       0       0       0       0.0         44.0 Refunds       0       0       0       0       0         Subtotal, Non-Pay Costs       1,250,740,000       1,289,913,000       39,173,000       3.0	· ·	_		_	
44.0 Refunds       0       0       0       0.0         Subtotal, Non-Pay Costs       1,250,740,000       1,289,913,000       39,173,000       3.0			1	_	0.0
Subtotal, Non-Pay Costs 1,250,740,000 1,289,913,000 39,173,000 3.					0.0
		1,250,740,000	_		3.1
	Total Budget Authority by Object	1,268,519,000	1,308,741,000	40,222,000	3.2

Includes FTEs which are reimbursed from the NIH Roadmap for Medical Research

#### **Salaries and Expenses**

	Lxperises			
OBJECT CLASSES	FY 2010 Enacted	FY 2011 PB	Increase or Decrease	Percent Change
	Lilacieu	I D	Decrease	Change
Personnel Compensation:		<b>*</b>		
Full-time permanent (11.1)	\$11,868,000	\$12,568,000	\$700,000	5.9
Other than full-time permanent (11.3)	1,217,000	1,289,000	72,000	5.9
Other personnel compensation (11.5)	701,000	742,000	41,000	5.8
Military personnel (11.7)	337,000	357,000	20,000	5.9
Special personnel services payments (11.8)	0	0	0	0.0
Total Personnel Compensation (11.9)	14,123,000	14,956,000	833,000	5.9
Civilian personnel benefits (12.1)	3,322,000	3,518,000	196,000	5.9
Military personnel benefits (12.2)	334,000	354,000	20,000	6.0
Benefits to former personnel (13.0)	0	0	0	0.0
Subtotal, Pay Costs	17,779,000	18,828,000	1,049,000	5.9
Travel (21.0)	553,000	579,000	26,000	4.7
Transportation of things (22.0)	71,000	74,000	3,000	4.2
Rental payments to others (23.2)	7,000	7,000	0	0.0
Communications, utilities and				
miscellaneous charges (23.3)	198,000	207,000	9,000	4.5
Printing and reproduction (24.0)	163,000	172,000	9,000	5.5
Other Contractual Services:				
Advisory and assistance services (25.1)	7,689,000	8,206,000	517,000	6.7
Other services (25.2)	10,026,000	10,600,000	574,000	5.7
Purchases from government accounts (25.3)	13,405,000	14,009,000	604,000	4.5
Operation and maintenance of facilities (25.4)	434,000	454,000	20,000	4.6
Operation and maintenance of equipment (25.7)	25,000	26,000	1,000	4.0
Subsistence and support of persons (25.8)	0	0	0	0.0
Subtotal Other Contractual Services	31,579,000	33,295,000	1,716,000	5.4
Supplies and materials (26.0)	140,000	147,000	7,000	5.0
Subtotal, Non-Pay Costs	32,711,000	34,481,000	1,770,000	5.4
Total, Administrative Costs	50,490,000	53,309,000	2,819,000	5.6

NATIONAL INSTITUTES OF HEALTH
National Center for Research Resources

		Authorizin	Authorizing Legislation			
	PHS Act/ Other Citation	U.S. Code Citation	2010 Amount Authorized	FY 2010 Enacted	2011 Amount Authorized	FY 2011 PB
Research and Investigation	Section 301	42§241	Indefinite		Indefinite	
	Section 402(a)	42§281	Indefinite	\$1,268,519,000	Indefinite	\$1,308,741,000
National Center for Research Resources					100	
Total, Budget Authority				1,268,519,000		1,308,741,000

**Appropriations History** 

Fiscal	Budget Estimate	House	Senate	
Year	to Congress	Allowance	Allowance	Appropriation
2002	974,038,000	966,541,000	1,014,044,000	1,012,627,000
Rescission				(89,000)
2003	1,090,217,000	1,090,217,000	1,161,272,000	1,146,272,000
Rescission				(7,451,000)
2004	1,053,926,000	1,053,926,000	1,186,483,000	1,186,183,000
Rescission				(7,125,000)
2005	1,094,141,000	1,094,141,000	1,213,400,000	1,124,141,000
Rescission				(9,051,000)
2006	1,100,203,000	1,100,203,000	1,188,079,000	1,110,203,000
Rescission				(11,102,000)
2007	1,098,242,000	1,123,242,000	1,104,346,000	1,133,240,000
Rescission				0
2008	1,112,498,000	1,171,095,000	1,177,997,000	1,169,884,000
Rescission				(20,438,000)
Supplemental				6,114,000
2009	1,160,473,000	1,200,061,000	1,192,576,000	1,226,263,000
Rescission				0
2010	1,252,044,000	1,280,031,000	1,256,926,000	1,268,519,000
Rescission				0
2011	1,308,741,000			

<sup>1/</sup> Reflects enacted supplementals, rescissions, and reappropriations.

<sup>2/</sup> Excludes funds for HIV/AIDS research activities consolidated in the NIH Office of AIDS Research.

**Details of Full-Time Equivalent Employment (FTEs)** 

Details of Full-Time Equivalent Emp	oloyillelit (i	L 3 <i>)</i>	
OFFICE/DIVISION	FY 2009 Actual	FY 2010 Enacted	FY 2011 PB
Office of the Director	9	9	9
Office of Communications	4	4	4
Office of Science Policy	10	10	10
Office of Extramural Activities	34	32	34
Office of Administrative Management	19	16	19
Division of Biomedical Technology	10	10	10
Division of Clinical Research Resources	17	17	17
Division of Comparative Medicine	8	8	8
Division of Research Infrastructure	13	13	13
Total	124	119	124
Includes FTEs which are reimbursed from the NIH Roadm	nap for Medic	al Research	
FTEs supported by funds from Cooperative Research			
and Development Agreements	(0)	(0)	(0)
FISCAL YEAR	Average GM/GS Grade		
2007	12.7		
2008	12.8		
2009	12.9		
2010	12.9 12.9		
2011	12.9		

#### **Detail of Positions**

	Detail of Positions				
GRADE	FY 2009 Actual	FY 2010 Enacted	FY 2011 PB		
Total, ES Positions	2	2	2		
Total, ES Salary	343,354	350,209	359,400		
GM/GS-15	23	22	23		
GM/GS-14	39	39	39		
GM/GS-13	31	30	31		
GS-12	10	9	10		
GS-11	6	5	6		
GS-10	2	1	2		
GS-9	3	3	3		
GS-8	2	2	2		
GS-7	4	4	4		
GS-6	0	0	0		
GS-5	0	0	0		
GS-4	0	0	0		
GS-3	2	2	2		
GS-2	0	0	0		
GS-1	0	0	0		
Subtotal	122	117	122		
Grades established by Act of					
July 1, 1944 (42 U.S.C. 207):					
Assistant Surgeon General	0	0	0		
Director Grade	3	3	3		
Senior Grade	0	0	0		
Full Grade	0	0	0		
Senior Assistant Grade	0	0	0		
Assistant Grade	0	0	0		
Subtotal	3	3	3		
Ungraded	24	22	24		
Total permanent positions	126	123	126		
Total positions, end of year	133	130	133		
Total full-time equivalent (FTE)					
employment, end of year	124	119	124		
Average ES salary	171,677	175,111	178,612		
Average GM/GS grade	12.9	12.9	12.9		
Average GM/GS salary	106,165	108,288	110,454		

Includes FTEs which are reimbursed from the NIH Roadmap for Medical Research.

### **New Positions Requested**

	FY 2011			
	Grade	Number	Annual Salary	
Construction Project Manager	GS-15	1	\$128,886	
Health Scientist Administrator	GS-14	1	109,570	
Health Scientist Administrator	GS-13	1	92,723	
Construction Engineer	GS-13	1	92,723	
Program Analyst	GS-12	1	77,973	
Total Requested		5	\$501,875	