

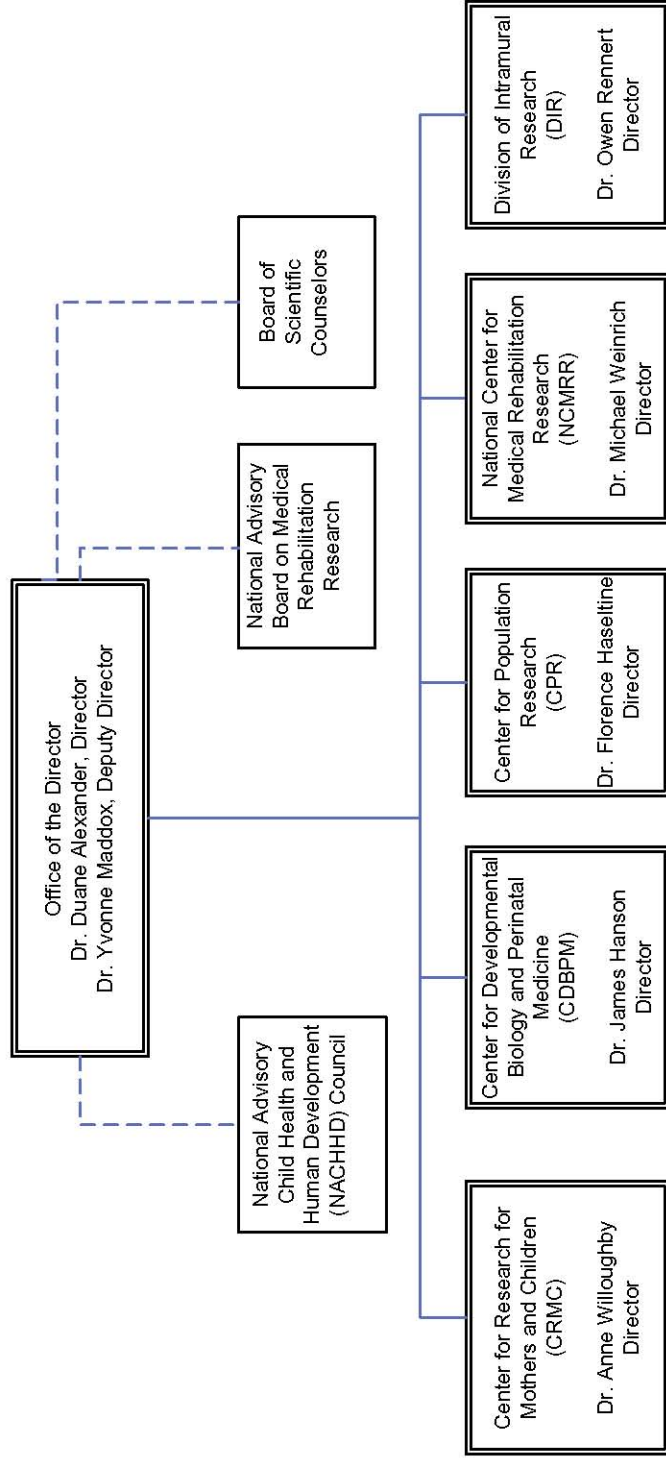
DEPARTMENT OF HEALTH AND HUMAN SERVICES

NATIONAL INSTITUTES OF HEALTH

National Institute of Child Health and Human Development

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# National Institute of Child Health and Human Development



**FY 2008 Proposed Appropriation Language**

**NATIONAL INSTITUTES OF HEALTH**

National Institute of Child Health and Human Development

*For carrying out section 301 and title IV of the Public Health Service Act with respect to child health and human development \$1,264,946,000.*

**Supplementary Exhibit**

**Comparison of Proposed FY 2008 Appropriation Language to  
Most Recently Enacted Full-Year Appropriations**

**NATIONAL INSTITUTES OF HEALTH**

National Institute of Child Health and Human Development

For carrying out section 301 and title IV of the Public Health Service Act with respect to child health and human development, [~~\$1,277,544,000~~] **\$1,264,946,000** (Department of Health and Human Services Appropriations Act, 2006).

**National Institutes of Health  
National Institute of Child Health and Human Development**

**Amounts Available for Obligation 1/**

Source of Funding	FY 2006 Actual	FY 2007 Continuing Resolution	FY 2008 Estimate
Appropriation	\$1,277,544,000	\$1,264,769,000	\$1,264,946,000
Enacted Rescissions	-12,775,000	0	0
Subtotal, Adjusted Appropriation	1,264,769,000	1,264,769,000	1,264,946,000
Real Transfer under Roadmap Authority	-11,302,000		
Real Transfer under Secretary's One-percent transfer authority	-869,000		
Comparative transfer from OD for NIH Roadmap	11,302,000		
Comparative Transfer to NIBIB	-86,000	-88,000	
Comparative transfer to OD	-38,000	-40,000	
Comparative Transfer to NCRR	-251,000	-431,000	
Comparative Transfers to the Office of the Assistant Secretary for Admin. and Mgmt. and to the Office of the Assistant Secretary for Public Affairs	-4,000	-4,000	
Subtotal, Adjusted Budget Authority	1,263,521,000	1,264,206,000	1,264,946,000
Subtotal, Adjusted Budget Authority	1,263,521,000	1,264,206,000	1,264,946,000
Unobligated balance lapsing	0	0	0
Total obligations	1,263,521,000	1,264,206,000	1,264,946,000

1/ Excludes the following amounts for reimbursable activities carried out by this account:

FY 2006 - \$37,516    FY 2007 - \$37,535    FY 2008 - \$37,565

Excludes \$984,077 in FY 2006 and \$984,077 in FY 2007 for royalties.

**NATIONAL INSTITUTES OF HEALTH**  
**National Institute of Child Health and Human Development**

(Dollars in Thousands)

Budget Mechanism - Total

MECHANISM	FY 2006 Actual		FY 2007 Continuing Resolution		FY 2008 Estimate		Change	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount
<b>Research Grants:</b>								
<b>Research Projects:</b>								
Noncompeting	1,304	\$505,264	1,187	\$470,135	1,225	\$497,073	38	\$26,938
Administrative supplements	(82)	12,030	(55)	6,350	(46)	5,350	-9	-1,000
<b>Competing:</b>								
Renewal	106	61,948	130	75,284	105	60,990	-25	-14,294
New	315	79,102	383	96,096	340	87,508	-43	-8,588
Supplements	2	210	0	0	0	0	0	0
Subtotal, competing	423	141,260	513	171,380	445	148,498	-68	-22,882
Subtotal, RPGs	1,727	658,554	1,700	647,865	1,670	650,921	-30	3,056
<b>SBIR/STTR</b>	129	28,921	129	29,869	119	27,602	-10	-2,267
Subtotal, RPGs	1,856	687,475	1,829	677,734	1,789	678,523	-40	789
<b>Research Centers:</b>								
Specialized/comprehensive	43	61,356	44	62,669	44	61,729	0	-940
Biotechnology	0	250	0	0	0	0	0	0
Comparative medicine	0	240	0	0	0	0	0	0
Research Centers in Minority Institutions	0	0	0	0	0	0	0	0
Subtotal, Centers	43	61,846	44	62,669	44	61,729	0	-940
<b>Other Research:</b>								
Research careers	251	43,043	255	43,369	265	44,269	10	900
Cooperative clinical research	86	38,993	85	40,798	85	40,186	0	-612
Biomedical research support	0	0	0	0	0	0	0	0
Minority biomedical research support	0	0	0	0	0	0	0	0
Other	135	23,021	140	22,906	140	22,562	0	-344
Subtotal, Other Research	472	105,057	480	107,073	490	107,017	10	-56
<b>Total Research Grants</b>	<b>2,371</b>	<b>854,378</b>	<b>2,353</b>	<b>847,476</b>	<b>2,323</b>	<b>847,269</b>	<b>-30</b>	<b>-207</b>
<b>Research Training:</b>								
Individual awards	116	4,973	116	5,219	116	5,219	0	0
Institutional awards	712	30,877	712	31,880	712	31,880	0	0
Total, Training	828	35,850	828	37,099	828	37,099	0	0
Research & development contracts (SBIR/STTR)	659 (2)	148,516 (64)	668 (2)	150,458 (64)	668 (2)	150,458 (64)	0 0	0 0
Intramural research	370	158,935	370	158,636	376	157,526	6	-1,110
Research management and support	176	54,540	177	55,358	181	55,912	4	554
NIH Roadmap for Medical Research	1	11,302	1	15,179	0	16,682	-1	1,503
Total, NICHD	547	1,263,521	548	1,264,206	557	1,264,946	9	740

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

**NATIONAL INSTITUTES OF HEALTH**  
**National Institute of Child Health and Human Development**  
**Budget Authority by Program**  
(Dollars in thousands)

	FY 2004 Actual		FY 2005 Actual		FY 2006 Actual		FY 2006 Comparable		FY 2007 Continuing Resolution		FY 2008 Estimate		Change	
	FTEs	Amount	FTEs	Amount	FTEs	Amount	FTEs	Amount	FTEs	Amount	FTEs	Amount	FTEs	Amount
<b>Extramural Research</b>														
Detail:														
Center for Developmental Biology and Perinatal Medicine	--	--	--	--										
Center for Population Research	\$ 326,014	\$ 318,386	\$ 324,563	\$ 324,563	\$ 321,315	\$ 321,315	\$ 324,563	\$ 321,315	\$ 402,076	\$ 310,770	\$ 313,056	\$ 390,562		-\$11,514
Center for Research for Mothers and Children	\$ 644,814	\$ 651,342	\$ 314,400	\$ 314,400										
National Center for Medical Rehabilitation Research	\$ 65,295	\$ 80,147	\$ 78,717	\$ 78,717										
<b>Subtotal, Extramural</b>	1,036,123	1,049,875	1,038,995	1,038,995										
<b>Intramural research</b>	375	154,427	354	159,036	370	159,051	370	158,935	370	158,636	376	157,526	6	-1,110
<b>Res. management &amp; support</b>	172	51,295	189	53,379	176	54,552	176	54,540	177	55,358	181	55,912	4	554
<b>NIH Roadmap for Medical Research</b>	--	--	5	8,031	1	11,302	1	11,302	1	15,179	0	16,682	-1	1,503
<b>TOTAL</b>	547	1,241,845	548	1,270,321	547	1,263,900	547	1,263,521	548	1,264,206	557	1,264,946	9	740

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

## **Major Changes in the Fiscal Year 2008 Budget Request**

Major changes by budget mechanism and/or budget activity detail are briefly described below. Note that there may be overlap between budget mechanism and activity detail and these highlights will not sum to the total change for the FY 2008 budget request for NICHD, which is \$0.740 million increase over the FY 2007 Estimate, for a total of \$1,264,946.

Research Project Grants (+\$4.0 million, total \$645.6 million). NICHD will support a total of 1670 Research Project Grant (RPG) awards in FY 2008. Non-competing RPGs will increase by 38 awards and increase by \$26.9 million. Competing RPGs will decrease by 68 awards and decrease by \$22.9 million.

Research Careers (+\$0.9 million; total \$44.3 million): NICHD will support the Pathway to Independence program, by funding an additional 10 awards in FY 2008. Total support for the Pathway program in FY 2008 is 18 awards and \$1.6 million dollars.

NIH Roadmap for Biomedical research (+\$1.5 million; total \$16.7 million): NICHD will continue its support of the NIH Roadmap, an incubator for new ideas and initiatives that will accelerate the pace of discovery, in FY 2008.

Major Change: No funding requested for the NCS (-\$9.8 million; total \$0.0 million): Consistent with the FY 2007 President's Budget, this budget does not continue the National Children's Study (NCS) in FY 2008. Due to the continuation of FY 2006 activities under a continuing resolution, funding for activities pertaining to NCS are sustained at the FY 2006 funding level of \$9.8 million from NICHD (approximately \$11 million in total). The FY 2006 level sustains the support for existing activities of the Vanguard Centers and the Data Coordination Center. The FY 2008 President's budget requests no funds to implement or continue planning for the proposed National Children's Study. To phase out this study, existing contracts for pilot studies and other activities will be allowed to expire when the FY 2007 funds provided for planning are exhausted and no additional contracts will be awarded. The NICHD will conduct no additional meetings of the National Children's Study Advisory Committee, and NCS program staff will be reassigned to other responsibilities.

**NATIONAL INSTITUTES OF HEALTH**  
**National Institute of Child Health and Human Development**  
**Summary of Changes**

FY 2007 Continuing Resolution		\$1,264,206,000	
FY 2008 Estimated Budget Authority		1,264,946,000	
Net change		740,000	
CHANGES	FY 2007 Continuing Resolution Base		Change from Base
	FTEs	Budget Authority	FTEs Budget Authority
A. Built-in:			
1. Intramural research:			
a. Annualization of January 2007 pay increase			
		\$62,500,000	\$413,000
b. January 2008 pay increase			
		62,500,000	1,417,000
c. Two extra days of pay			
		62,500,000	481,000
d. Payment for centrally furnished services			
		29,371,000	294,000
e. Increased cost of laboratory supplies, materials, and other expenses			
		0	0
		66,765,000	1,343,000
Subtotal		3,948,000	
2. Research Management and Support:			
a. Annualization of January 2007 pay increase			
		\$23,769,000	\$157,000
b. January 2008 pay increase			
		23,769,000	539,000
c. Two extra days of pay			
		23,769,000	183,000
d. Payment for centrally furnished services			
		7,604,000	76,000
e. Increased cost of laboratory supplies, materials, and other expenses			
		0	0
		23,985,000	454,000
Subtotal		1,409,000	
Subtotal, Built-in		5,357,000	



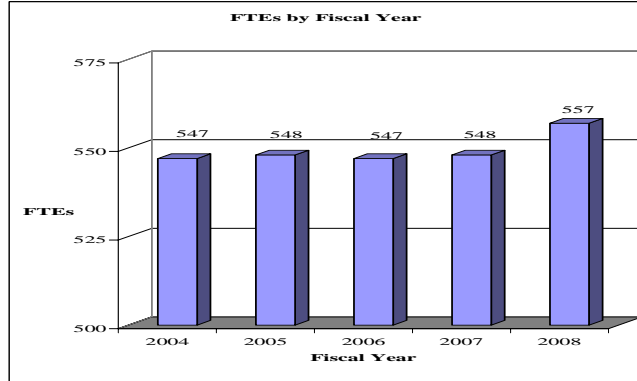
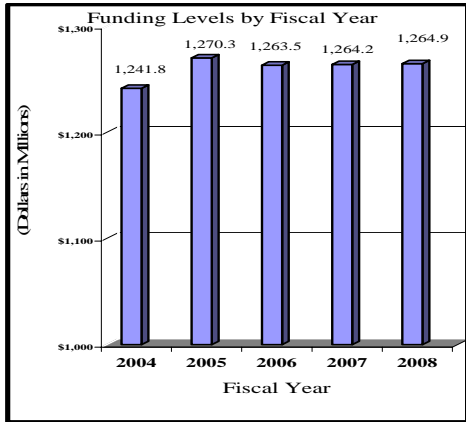
**NATIONAL INSTITUTES OF HEALTH**  
**National Institute of Child Health and Human Development**

**Summary of Changes--continued**

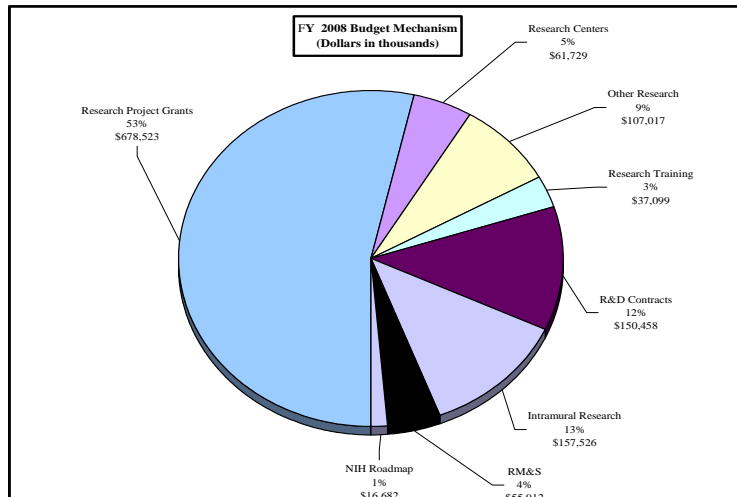
CHANGES	FY 2007 Continuing Resolution Base		Change from Base	
	No.	Amount	No.	Amount
<b>B. Program:</b>				
1. Research project grants:				
a. Noncompeting	1,187	\$476,485,000	38	\$25,938,000
b. Competing	513	171,380,000	-68	-22,882,000
c. SBIR/STTR	129	29,869,000	-10	-2,267,000
Total	1,829	677,734,000	-40	789,000
2. Research centers	44	62,669,000	0	-940,000
3. Other research	480	107,073,000	10	-56,000
4. Research training	828	37,099,000	0	0
5. Research and development contracts	668	150,458,000	0	0
Subtotal, extramural				-207,000
	<u>FTEs</u>		<u>FTEs</u>	
6. Intramural research	370	158,636,000	6	-5,058,000
7. Research management and support	177	55,358,000	4	-855,000
8. Cancer control and prevention	0	0	0	0
9. Construction		0		0
10. Buildings and Facilities		0		0
11. NIH Roadmap for Medical Research	1	15,179,000	-1	1,503,000
Subtotal, Program	548	1,264,206,000	9	-4,617,000
Total Changes	548		9	740,000

## FY 2007 Budget Graphs

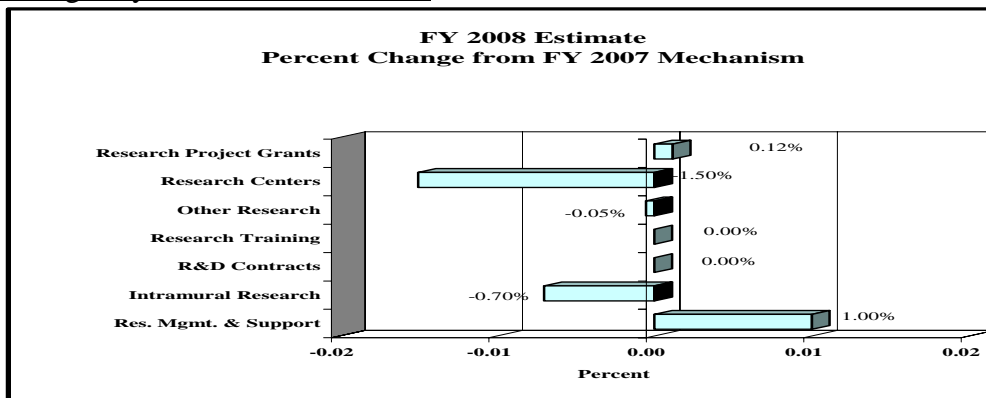
### History of Budget Authority and FTEs:



### Distribution by Mechanism:



### Changes by Selected Mechanism:



**Justification**  
**National Institute of Child Health and Human Development**

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

Budget Authority:

FY 2006		FY 2007		FY 2008		Increase or	
Actual		Continuing Resolution		Estimate		Decrease	
<u>FTEs</u>	<u>BA</u>	<u>FTEs</u>	<u>BA</u>	<u>FTEs</u>	<u>BA</u>	<u>FTEs</u>	<u>BA</u>
547	\$1,263,521,000	548	\$1,264,206,000	557	\$1,264,946,000	+9	\$740,000

This document provides justification for the Fiscal Year (FY) 2008 activities of the National Institute of Child Health and Human Development, including HIV/AIDS activities. Details of the FY 2008 HIV/AIDS activities are in the “Office of AIDS Research (OAR)” Section of the Overview. Details on the Roadmap/Common Fund are located in the Overview, Volume One.

**Director’s Overview**

**Institute Mission**

The mission of the National Institute of Child Health and Human Development (NICHD) is to ensure that every child is born healthy and wanted; that women suffer no harmful effects from reproductive processes; that all children have the chance to achieve their full potential for healthy and productive lives free from disease or disability; and to ensure the health, productivity, independence and well-being of all people through optimal rehabilitation.

To achieve its mission, the NICHD conducts and supports basic, clinical and translational research and training programs that span a broad spectrum -- from the formation of cells, tissues and organ systems through pregnancy, birth and childhood growth and development, to the influence of economic and social structures on the well being of mothers, children and families, and the enhanced functioning of individuals with physical and cognitive disability. The shared goal of these diverse research areas is to lay a strong foundation for protecting and enhancing human development and functioning throughout the lifespan.

**Recent Progress**

Funds requested in the FY 2008 budget will allow the NICHD to continue progress toward conquering some of the nation’s most pressing health problems. For example, HIV transmission from an infected woman to a fetus or newborn in the United States has declined from 25 percent

to less than 2 percent,<sup>1</sup> thanks in part to NICHD's ongoing program of clinical trials in partnership with the National Institute of Allergy and Infectious Diseases. Childhood infection with *Haemophilus influenzae B* (Hib), once the leading cause of acquired mental retardation, has dropped more than 99 percent<sup>2</sup> because of the development of the Hib vaccine by NICHD scientists. New diagnostic techniques and treatments reverse the infertility that once prevented couples from having children. Overall infant deaths rates have declined by more than 70 percent in the 45 years since the Institute was founded.<sup>3</sup> Since the NICHD-led Back to Sleep public education program began in 1994, deaths from Sudden Infant Death Syndrome (SIDS) have dropped by more than 50 percent.<sup>4</sup> The campaign started only after NICHD-funded research determined that back-sleeping to lower SIDS risk did not introduce other health risks for infants. New findings by NICHD-supported investigators, of brainstem abnormalities in infants who died of SIDS,<sup>5</sup> could one day enable clinicians to identify newborns at high risk of SIDS and take special measures to prevent their death.

### **Future Directions**

The most far-reaching new opportunity for NICHD is developmental epigenetics, the subject of a major FY 2008 initiative. The initiative recognizes that genes, as encoded by DNA, alone cannot fully explain what goes right and what goes wrong in developmental processes. Epigenetics is the study of modifications in the timing of gene functions – that is, when genes switch “on” or “off” to control myriad biological processes -- that do not alter the structural DNA coding of affected genes. Yet, the changes in gene function can be passed from parent to child, and from one cell to the next, throughout development. Epigenetic modifications may be triggered by environmental exposures, may occur spontaneously, or may result from other, yet-to-be identified causes. The importance of epigenetics is indicated by the awarding of the 2006 Nobel Prize in Physiology or Medicine for the breakthrough discovery of the epigenetic phenomenon known as “RNA interference.”<sup>6</sup> The prize was shared by NICHD grantee Dr. Craig C. Mello and Dr. Andrew Z. Fire, funded by the National Institute of General Medical Sciences.

<sup>1</sup> Achievements in Public Health: Reduction in Perinatal Transmission of HIV Infection – United States, 1985-2005. MMWR 2006; 55:592-597.

<sup>2</sup> Progress Toward Eliminating Haemophilus influenzae Type b Disease Among Infants and Children – United States, 1987-1997. MMWR 1998;47:993-998.

<sup>3</sup> Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System; Vital statistics of the United States, vol ii, mortality, Part A, for data years 1950-93. Public Health Service. Washington: U.S. Government Printing Office; for 1994-99, data are available on the NCHS Web site at [www.cdc.nchs/datawh/statab/unpubd/mortabs.htm](http://www.cdc.nchs/datawh/statab/unpubd/mortabs.htm); Hoyert DL, Smith BL, Arias E, Murphy SL. Deaths: Final data for 1999. National vital statistics reports. Vol 49 no 8. Hyattsville, Maryland: National Center for Health Statistics. 2001.; Minino A, Heron M, Smith B, Kochanek K. Deaths: Final data for 2004. National vital statistics reports. Hyattsville, Maryland. National Center for Health Statistics. Forthcoming.

<sup>4</sup> Task Force on Sudden Infant Death Syndrome. The Changing Concept of Sudden Infant Death Syndrome: Diagnostic Coding Shifts, Controversies Regarding the Sleeping Environment, and New Variables to Consider in Reducing Risk. Pediatrics 2005;116:1245-1255.

<sup>5</sup> Paterson DS, Trachtrenberg FL, Thompson EG, Belliveau RA, Beggs AH, Darnall R, Chadwick AE, Krous HF, Kinney HC. Multiple serotonergic brainstem abnormalities in sudden infant death syndrome. JAMA 2006; 296:2124-2132.

<sup>6</sup> Fire A, Xu SQ, Montgomery MK, Kostas SA, Driver SE, Mello CC. Potent and specific genetic interference by double-stranded RNA in *Caenorhabditis elegans*. Nature 1998; 391:806-811.

Developmental epigenetics refers to how epigenetic modification of genes is superimposed onto developmental processes, with implications across the range of biomedical research, including normal and abnormal development of the immune system, reproductive processes, birth defects and brain development. NICHD's initiative will be one of the first major efforts to apply epigenetics to conditions and processes other than those related to cancer, a primary focus of existing epigenetics research. The initiative will mount a joint intramural/extramural research endeavor enabling the synergy of the two programs to stimulate research on an array of important topics. Such topics include molecular events, early in embryological development, whose effect may not be apparent until disease emerges late in childhood or in adulthood. These events, stimulated by nutritional, environmental, or other factors influence fetal growth and development and play a role in a range of disorders, from birth defects to obesity to behavioral disorders to coronary artery disease.

Translating basic scientific discoveries into safe and effective interventions to reduce infant mortality and cognitive, physical disability and to lay the foundation for lifelong health is critical to the NICHD mission. But this mission will only be fully realized if our research includes preemptive interventions that enable individuals to avoid or recover from illness and injury and realize their innate abilities and functional capacities in day-to-day life. For example, NICHD's pediatric critical care research program is creating a unique new approach that could be a model of care for other populations in the future. The pediatric program differs from most others by focusing not on a specific disease, organ system or type of injury, but rather on the complex challenges of life-threatening illnesses and injuries, that may affect not only multiple organ systems, but also the family and the community. The program also stresses continuous and excellent care at each stage, from the pediatric intensive care unit to ongoing care for young survivors whose conditions leave them with chronic illness or disability. Outcomes of this comprehensive approach to critical care for children should inform future research for a range of conditions within the missions of the NICHD and other Institutes.

Finally, to maintain our future research progress, extramural and intramural research will continue to recruit and train the most promising new researchers in areas of priority to the Institute. Of special importance is NICHD's continuing efforts to increase the number of well-trained minority researchers and to strengthen research programs at minority-serving institutions. For example, NICHD's Extramural Associates Research Development Award (EARDA) program assists minority-serving and women's institutions in establishing robust scientific research infrastructures. The Institute's "Cooperative Reproductive Science Research Centers at Minority Institutions" program supports research partnerships between leading minority and non-minority academic research centers. These initiatives reflect the Institute's continuing recognition that scientists from racial and ethnic communities experiencing disproportionate rates of many conditions must play a critical role in reducing such health disparities.

## **Justification of FY 2008 Budget**

### **Overall Budget Policy**

The NICHD's research priorities are to support investigator-initiated research projects, new investigator research, career development and crucial infrastructure programs that enable both new and experienced investigators to conduct pre-clinical and clinical trials at established sites

with experience in recruiting and conducting trials in specific, high-priority populations, including children, pregnant women, and individuals with disabling conditions. The Institute carefully balances the portfolio mix to utilize the appropriate support mechanism for the requirements of the scientific program. The NICHD supports systematic planning and evaluation activities to assess the Institute's unique research, career development and training programs. With consultation and input from members of the NICHD Advisory Council and other outside experts, reviews are conducted and the results are presented to the NICHD Institute and program officials to make decisions concerning future program directions and related funding.

**Center for Developmental Biology and Perinatal Medicine:** This program supports basic, clinical and translational research on how birth defects and problems of child health and development start and unfold over time. Major interest areas include developmental biology, genetics and teratology (the study of malformations), mental retardation and developmental disabilities, and pregnancy and perinatology. Important ongoing efforts include special research networks that focus on birth defects and numerous neuroscience projects, many of which represent trans-NICHD and trans-NIH collaborations. The program's well-established Mental Retardation and Developmental Disabilities Research Centers (MRDDRCs) form a stable infrastructure within which multidisciplinary teams of scientists, with various sources of support, investigate the multiple causes and effects of brain damage that leads to lessened intellectual and adaptive functioning. For example, investigators led by the director of the Vanderbilt University MRDDRC, with additional support from the NICHD, the National Institute of Mental Health and private funders, recently discovered a version of a gene that has been linked to autism in families in which more than one child has the disorder.<sup>7</sup> Recognizing the scientific synergy at MRDDRCs and increasing interest in Fragile X syndrome, the NICHD created its innovative "centers within centers" to target this leading cause of mental retardation. Pregnancy and perinatology research continues to focus on high risk pregnancies and poor pregnancy outcomes, including preterm labor and birth, fetal disorders, stillbirth, newborn conditions associated with prematurity, and SIDS. Program priorities include support of specialized clinical and translational research and related initiatives that permit testing new treatments, such as the surgical correction of certain fetal conditions, and reassessing current clinical practices. For example, early data from a study of routine use of acid reflux medication in premature infants suggest that the medication may actually increase the risk of necrotizing enterocolitis (NEC), a potentially fatal intestinal inflammation.<sup>8</sup>

**Budget Policy:** A total of \$391 million will support the FY 2008 NICHD Developmental Biology and Perinatal Medicine (DBPM) program, a 1% decrease under the FY 2007 level. Cost savings will be achieved through careful prioritization of renewal grant awards. The DBPM program will align the portfolio to continue strong support of the mental retardation and developmental disabilities program while supporting emerging FY 2008 research priorities such

<sup>7</sup> Campbell DB, Sutcliffe JS, Ebert PH, Militerni R, Bravaccio C, Trillo S, Elia M, Schneider C, Melmed R, Sacco R, Persico AM, Levitt P. A genetic variant that disrupts *MET* transcription is associated with autism. *PNAS* 2006;103:16834-16839.

<sup>8</sup> Guillet R, Stoll BJ, Cotton CM, Gantz M, McDonald S, Poole WK, Phelps DL, for members of the National Institute of Child Health and Human Development Neonatal Research Network. Association of H2-blocker therapy and higher incidence of necrotizing enterocolitis in very low birth weight infants. *Pediatrics* 2006; 117:137-142.

as the initiative to create and use innovative genetic and molecular biotechnology, with a goal of enabling scientists to identify and describe genetic and environmental factors responsible for skeletal, neural tube and craniofacial malformations. Given the maturity of MRDDRCs, the NICHD will re compete this activity in FY 2008, to encourage more collaborative, translational research, including multi-site clinical trials of interventions to prevent, diagnose, ameliorate, and/or treat mental retardation and developmental disabilities. Program funding will provide \$4.5 million to address key aspects of targeted translational and intervention research in mental retardation. The emerging research priority in Pregnancy and Perinatology program is to understand the causes and, serious but poorly-recognized, health risks of "late-term" (or "near-term") infants, born at or after 34 through 37 weeks of gestation. These understudied newborns may seem healthy but are at elevated risk of respiratory distress, seizures, feeding problems and other potentially serious or fatal disorders. For example, SIDS risk in these infants is twice that of those born after 37 weeks' gestation.<sup>9</sup> An additional \$2.5 million will provide funding to initiate a national newborn screening research network.

<sup>9</sup> Raju TNK, Higgins RD, Stark AR, Leveno KJ. Optimizing Care and Outcome for Late-Preterm (Near-Term) Infants: A Summary of the Workshop Sponsored by the National Institute of Child Health and Human Development. *Pediatrics* 2006; 118:1207-1214.

### **Portrait of a Program: Newborn Screening Initiative**

FY 2007 Level: \$1.8 million

FY 2008 Level: \$4.3 million

Change: \$2.5 million

Imagine having the ability to take a drop of a newborn infant's blood and examine it to determine whether the infant has one of hundreds of genetic disorders and conditions. Imagine the ability to treat a condition as soon as it's diagnosed, sparing that child a lifetime of mental retardation, physical disability, or early death. Several NICHD programs -- both ongoing and planned -- seek to make this goal a reality. The vision is to duplicate, with multiple rare genetic conditions, the success of now-routine screening and treatment of newborns for phenylketonuria (PKU) and for hypothyroidism. Each condition, present at birth, was once responsible for many cases of mental retardation. Now, routine screening shortly after birth can identify newborns with these conditions and treatments can begin before irreversible brain damage occurs.

Currently, the number of genetic conditions for which newborns are screened varies from state to state, although more and more are adopting a standard panel of screening tests that is recommended by the Secretary's Advisory Committee on Heritable Disorders and Genetic Diseases in Newborns and Children. Of the 4.1 million American infants who undergo such genetic screening each year, about 4,000 are diagnosed with a genetic condition; however, currently-available technologies limit the number of disorders for which newborn infants can be screened. The NICHD has solicited and funded proposals for projects to develop gene chips and other technologies that could identify hundreds of rare genetic disorders in a single test using one drop of an infant's blood. In addition, the NICHD will fund new projects to spur research on treatments for potentially screenable disorders.

Finally, to complement these efforts, the NICHD will create a multi-site, newborn screening translational research network. This will allow the NICHD to help scientists more easily test the most promising new screening technologies and promote the development of new disease therapies in collaboration with state newborn screening programs. The research network will be developed with other NIH Institutes, other federal agencies, patient- and disease-related associations, and biotechnology companies. International collaborations with researchers, agencies and institutions should lead to expanded newborn screening and treatment options.

**Center for Research for Mothers and Children:** This program supports basic, clinical and translational research on maternal health and child development problems. These include gestational diabetes, childhood antecedents of adult diseases, obesity and overweight, endocrinology, nutrition and growth, mechanisms of cognition and learning disabilities, and maternal and child HIV/AIDS. Among the program's major priorities are its Global Network for Women's and Children's Health Research (GN), founded with co-funding from the Bill and Melinda Gates Foundation. The GN's early successes prompted the NICHD to continue its activities with new solicitations in FYs 2007 and 2008. The goal of the GN is to test and make available relatively simple, affordable interventions that can save the lives and protect the health



of millions of women and children in resource-poor countries that have little medical or public health infrastructure. For example, a network-supported study in rural India demonstrated that the drug, misoprostol, provides a safe, convenient, and inexpensive means to prevent postpartum hemorrhage in areas of the world where maternal deaths from this excessive bleeding after birth are common, most births occur at home, and the infrastructure needed to support standard therapy in developed countries is in short supply. Child development and behavior research priorities in the Research for Mothers and Children program also include a range of learning concerns, from identifying the best way to enhance the school readiness of very young children, through identifying the best way to overcome learning disorders of older children and lessen learning disparities among minority children. More generally, NICHD's ongoing support of pediatric and obstetric pharmacology research should enable clinicians treating infants, children, and pregnant women to prescribe medications that have been rigorously tested for safety and efficacy in these vulnerable populations. Recognizing the critical importance of this problem, this NICHD program maintains unique networks of specialized clinical sites that allow investigators, including those supported by other Institutes and the pharmaceutical industry, to conduct animal studies and clinical trials. Through this program, the NICHD also supports the specialized needs of women, adolescents and children with or exposed to HIV infection, including crucial support for the adolescent medicine trials network. The clinical research sites test behavioral and clinical interventions for some of the nation's most vulnerable youth who are at highest risk of HIV infection. Consistent with the FY 2007 President's Budget, this budget does not continue the National Children's Study (NCS) in FY 2008. Due to the continuation of FY 2006 activities under a continuing resolution, funding for activities pertaining to NCS are sustained at the FY 2006 funding level of \$9.8 million from NICHD (approximately \$11 million in total). The FY 2006 level sustains the support for existing activities of the Vanguard Centers and the Data Coordination Center. The FY 2008 President's budget requests no funds to implement or continue planning for the proposed National Children's Study. To phase out this study, existing contracts for pilot studies and other activities will be allowed to expire when the FY 2007 funds provided for planning are exhausted and no additional contracts will be awarded. The NICHD will conduct no additional meetings of the National Children's Study Advisory Committee, and NCS program staff will be reassigned to other responsibilities.

Budget Policy: The Research for Mothers and Children program budget is estimated, for FY 2008, to be \$221 million, an increase of 3.9%. This funding supports programs such as the Global Network for Women's and Children's Health Research, the Pediatric, Adolescent, and Maternal AIDS program, the Pediatric Pharmacology Research Units (PPRU), and the Obstetric-Fetal Pharmacology Research Units. The endocrinology and nutrition research program plans to build on NICHD grantee discoveries about the mechanism underlying the necrotizing enterocolitis (NEC) inflammatory process, and the therapeutic effect, in experimental rats, of a small protein (epidermal growth factor, or EGF) that occurs in maternal milk. These discoveries will enable scientists to focus on developing ways to identify infants at high risk of NEC and to treat them before the disease takes hold. NEC has long puzzled scientists and dismayed clinicians responsible for premature infants. As soon as NEC screening methods and therapies are ready, investigators will be able to test them in established, highly-specialized clinical sites supported by the NICHD. The funding will energize the research community to explore new concepts, including prevention of the pain and devastation of NEC. The Institute will seek collaborations with other Institutes and agencies to expand the NEC program. Mounting

evidence of the health illiteracy of U.S. children and youth, and the potential health effects of such illiteracy, underlie a new NICHD initiative on pediatric health literacy. Endocrinology and nutrition research priorities include exploiting recent breakthrough discoveries of NICHD grantees. One such discovery is that naturally-occurring sugars in human milk, known as oligosaccharides, prevent or lessen potentially fatal infectious diarrhea in infants. Further research led to findings that synthetic versions of these substances could become a new class of drugs. Unlike antibiotics used now, the new drugs could eliminate the risk of developing drug-resistant strains of infectious bacteria and viruses of the gastrointestinal tract.

### **Portrait of a Program: Implementing the Best Pharmaceuticals for Children Act**

FY 2007 Level: \$25.0 million

FY 2008 Level: \$25.0 million

Change: \$0.0 million

Pediatricians and other clinicians who treat children face a common challenge of prescribing just the right dose of medication for their young patients. Because drugs may be metabolized differently and have different effects in children than in adults, simply reducing an adult drug dose on the basis of a child's smaller size may be inappropriate. A large majority of drugs currently used in infants and children, however, have not been clinically tested in this population. This means that clinicians must base pediatric prescribing decisions on what they can predict from adult data and from experience, rather than scientific data. Responding to increasing evidence that specific pediatric studies were needed to provide more information on the safety, efficacy and dosage of medications for infants and children, the Federal Best Pharmaceuticals for Children Act became law in early 2002.

For drugs still under patent protection, this law directs the Food and Drug Administration (FDA) to request that manufacturers conduct additional studies to provide enough child-specific information to allow the agency to approve the drug for pediatric use. As an incentive for these studies, the law also modifies drug patent protection to allow manufacturers who do these studies an additional six months of market exclusivity. However, since distributors of drugs already off-patent have no similar incentive to conduct such studies, Congress turned to the NIH to provide information on pediatric use. NICHD's demonstrated interest in pediatric pharmacology – including the establishment of a specialized network that provides the infrastructure for conducting pediatric clinical studies – made it the logical Institute to lead this effort.

Collaborating with 18 other NIH Institutes and Centers, the FDA, other federal health agencies, and with input from outside professional and research advocacy organizations, the NICHD leads the development and publication of an annual list of priority drugs, as mandated by the 2002 law. This process identifies drugs for pediatric clinical trials and addresses the design and implementation of preclinical and clinical studies of important drugs in current, "off label" use in children. Studies conducted as a result of the BPC process are now yielding new, sometimes unexpected, information. For instance, ketamine, an anesthetic used in emergency rooms to sedate children during painful procedures, came into use without tests in pediatric subjects. The BPC process identified it as a priority drug because of its widespread use. Preclinical trials, however, showed that ketamine caused cell death in the developing brains of young, experimental animals, when administered in very large doses over a long period of time. As a result, scientists are now studying whether small doses, for short periods in experimental animals, similar to current clinical practice, avoids this problem. The ultimate goal is safe and pain free care of children.

**Center for Population Research:** This program supports a range of basic, clinical and translational research to better understand male and female reproductive processes. Program

goals include the discovery of effective treatments for infertility, as well as developing male and female contraceptive methods that are safer, more effective, more affordable, and potentially reversible. The Institute's continuing efforts in contraceptive research remain critical as U.S. pharmaceutical manufacturers withdraw from this area of research. Population research priorities in women's health include identifying causes of, and developing treatments for conditions such as endometriosis, uterine fibroids, vulvodynia, and pelvic floor disorders. Findings from earlier research on uterine fibroids have led to clinical trials of new medical therapies and treatment alternatives to hysterectomy, such as high intensity, focused ultrasound therapy. NICHD-supported scientists continue to investigate possible genetic and molecular mechanisms that cause uterine fibroids to form, explain why these pelvic tumors disproportionately affect African American women, and ultimately permit development of preventive interventions. Other important research priorities include understanding factors affecting the formation and stability of families, factors affecting how families function and influence child well-being, and factors influencing the increasingly vital issues of migration and immigration. Building on its strong foundation of working with communities experiencing health disparities, the NICHD will support the next phase of maternal and child health research that is planned and developed collaboratively with teams of local academic researchers, community members and NICHD scientists.

Budget Policy: A total of \$313 million, an increase of 0.7% over FY 2007, will support the NICHD Population Research program and continue into the next phase of the Community Child Health Research Network (CCHN), building on its strong foundation of working with communities experiencing health disparities. The resources will support vital research in basic, clinical, and translation research relevant to improving reproductive health.

**National Center for Medical Rehabilitation Research:** This program supports a broad range of basic, clinical and translational science with the goal of enhancing the daily functioning of adults and children with disabling conditions including spinal cord and traumatic brain injuries, musculoskeletal disorders, stroke, and pediatric illnesses and injuries that require critical care. As with the pediatric critical care program, translational research in the context of medical rehabilitation means moving not only from the laboratory "bench to bedside," but also from "bedside to curbside." Thus, important, emerging areas of research include rehabilitation studies in the behavioral sciences and in cutting-edge engineering technologies to enhance rehabilitation and to enable individuals with disabilities to perform the activities of daily living. Bioengineering research includes developing improved prostheses, wheelchairs, and other devices to enhance individuals' mobility, communication and cognition, and to control various aspects of their environments. Networked medical rehabilitation research centers evaluate practices that have been adopted into practice without being fully tested for efficacy and safety as well as new therapies. The program's traumatic brain injury and stroke rehabilitation research emphasizes understanding the underlying mechanisms of these events and their "disabling process," and translating these findings into effective therapies. For instance, the NICHD co-funded a researcher who demonstrated significant, long-term improvements in the weakened arms of stroke patients who were made to use their weakened arms for several weeks while their "good" arms were restrained.<sup>10</sup> The technique, known as constraint-induced movement therapy,

had been shown previously to be effective for many patients in small, uncontrolled trials, but this was the first, and very successful, large trial comparing this technique with conventional therapies.

Budget Policy: In FY 2008, the NICHD Medical Rehabilitation Research program funding will total \$110 million, an increase of 0.6% over FY 2007. Program increases will provide support for the Traumatic Brain Injury Clinical Trial network and solicit innovative research on problems in rehabilitation and the management of chronic diseases including community-based research partnerships to develop ways to test and measure the effects of clinical interventions in day-to-day life, away from rigorously-controlled laboratory conditions. Another emerging priority for the medical rehabilitation research program is developing medical nanoparticles that are engineered to target delivery of drugs or other therapeutic agents directly to muscle and skeletal tissues.

<sup>10</sup> Wolf SL, Winstein CJ, Miller JP, Taub E, Uswatte G, Morris D, Giuliani C, Light KE, Nichols-Larsen D, EXCITE Investigators. JAMA 2006; 296:2095-2104.

## Portrait of a Program: High-tech Replacements for Damaged Limbs

FY 2007 Level: \$4.1 million

FY 2008 Level: \$5.2 million

Change: \$1.1 million

Dramatically better survival rates of U.S. military personnel injured in Iraq and Afghanistan have added new urgency to the need for better prosthetic devices for individuals who have lost limbs because of battlefield injuries, accidents, or other causes. Through its medical rehabilitation research program, the NICHD is investing strategically in the most promising recent scientific advances in prosthetic devices that can help these individuals resume normal activities.

NICHD co-funded research led to development of a new, “intelligent” artificial knee joint that enables a user’s lower-leg prosthesis to adjust automatically to hills, stairs and other variable surfaces, offering greater mobility than conventional knee replacements. NICHD support will allow the research to develop better choices, in terms of function, for individuals who lost a leg close to the hip – a group traditionally difficult to fit with prosthesis. NICHD-supported scientists are investigating how to implant an artificial limb directly into the bone of the residual limb. Such an accomplishment would do away with the need for a socket device, which can often cause painful, chronic irritation of the socket. Currently, such implants are not possible, as they can allow disease organisms to enter the body, leading to serious infection. Now researchers are investigating materials that allow the body’s tissues to heal so completely at the site of implantation that infectious organisms would be sealed out.

For upper limb amputees, NICHD-funded researchers developed a prototype “bionic arm,” controlled by microprocessors that read signals through nerves that have been rerouted from the neck to the chest. When the wearer *thinks* about using the replacement arm, the chest muscles contract. Microprocessors in the arm sense electrical impulses given off by the chest muscles and respond accordingly. The prototype device allows users to open and close a hand, to reach above the head, and to sense heat and pressure. Another initiative seeks to use microprocessors to restore natural movement and sensation in people paralyzed in catastrophic accidents. This approach, funded by the NICHD, National Institute of Neurological Disorders and Stroke, and National Institute of Biomedical Imaging and Bioengineering, and currently being tested in volunteers with catastrophic paralysis, involves implanting a computer chip directly into the skull. Early studies show that the implant enables severely paralyzed patients to control the movement of a cursor on a computer screen. Eventually, researchers hope to adapt the implants so individuals can control their own or mechanical limbs simply by thinking about an activity.

**Intramural Research:** NICHD Intramural scientists seek to answer fundamental biological questions about each stage of development, beginning with how cells communicate within themselves and to each other, begin the processes of gene expression and replication, how these processes give rise to tissues, organs, and the whole organism, and ultimately, how the processes are integrated into development of the embryo, the fetus, and the organism. In understanding these normal developmental events, the intramural program’s research can determine what makes these processes go off track, how such biological “derailment” gives rise to disease and

disability, and how and at what point interventions could prevent, diagnose and treat diseases of women and children. NICHD's intramural scientists continue to make milestone contributions in both basic science and in translating basic discoveries into clinical breakthroughs. Most notable are the Hib vaccine and, more recently, vaccines against anthrax and *Staphylococcus aureus*, which were developed using a technology NICHD intramural scientists originally designed to produce safe and effective vaccines for children as young as 2 months. Intramural investigators also pioneered a technique for isolating single cells for biological analysis, developed new technologies that enable scientists to examine individual molecules in cells, and created new insights into the genetics of endocrine tumors, the multiple factors that contribute to childhood and adolescent obesity, and the role of cholesterol metabolism in the development of the fetus and malformations. To investigate the causes of infant mortality, premature birth, and congenital anomalies in a population of high-risk women, the NICHD established a novel intramural clinical research program "off campus," at an urban academic medical center. This program in perinatal medicine, at the Wayne State University in Detroit, represents an important partnership between the NICHD, the university and the state of Michigan, with the latter sharing the multi-million dollar costs of laboratory renovations. A particular emphasis of the branch is studying the role of maternal and fetal inflammation and "subclinical" infections (that cannot be detected by conventional tests) in preterm delivery.

**Budget Policy:** The NICHD FY 2008 Intramural research program budget of \$158 million, a decrease of 0.7%, supports the Institute's in-house research program. Cost savings accrue through increased cost efficiencies, extending the time between equipment replacements and reduced contract awards. The NICHD Intramural Research program has over 52 research projects including human subjects. This support includes the personnel costs of the research operation and operational support for such items as technology infrastructure and related bioinformatics. Given its strong foundation in unraveling the earliest developmental processes, the intramural program will lead the design and implementation of the FY 2008 trans-NIH initiative in developmental epigenetics and support the NIMH initiative to build an Autism Research Database.

**Research Management and Support (RMS):** Investments in research management and support include administrative functions such as strategic and operational planning to guide the Institute's research investments; systematic program evaluation; scientific review; grants management; budget analysis and management; scientific policy analysis; legislative analysis; and interactions with professional, family and patient organizations with interests in the Institute's mission. The coordination needed to fully support its international research activities, and its full array of outreach and public education activities, which are central to the Institute's mission, are also included here. Among the Institute's major outreach initiatives are continuing collaborations with the African American and American Indian communities, to disseminate information on reducing SIDS risk in ways that recognize distinctive forms of communications and customs within these communities. The NICHD plans to transform this successful public health effort into one targeting multiple ways to enhance birth outcomes. Working with parents, families, communities, and practitioners in these efforts, the NICHD will also build on a new outreach model that it pioneered, the newly-opened NIH "information center" in the Jackson Medical Mall Thad Cochran Center, in Jackson, Mississippi. This information center is an outgrowth of the NIH's Public Trust Initiative to enable the public to understand and have full

confidence in research that the NIH conducts and supports. In early 2006, NICHD decided to design and implement this activity after meeting with local residents in Jackson, to discuss how the community views participating in NIH research studies. The site of the new NICHD center is an urban mall, redeveloped as a unique facility offering visitors state-of-the-art medical care through a full range of outpatient clinics sponsored by the University of Mississippi Medical Center, with educational and outreach programs from Jackson State University and Tougaloo College. Services such as Women, Infants, and Children food supplements, after-school tutoring, and an array of retail shops and commercial services are also offered. The NICHD's center, staffed by local volunteers, provides science-based medical information, written for lay audiences and supplied by the Institute, NIH Office of the Director, National Institute of Diabetes, Digestive and Kidney Diseases, National Eye Institute, National Cancer Institute, and National Library of Medicine. In addition, NICHD recently unveiled its new, redesigned and now nationally recognized web site (<http://www.nichd.nih.gov>) which offers fast and easy access to a wide array of information, from child health to developmental disorders to women's health and medical rehabilitation, for both researchers and the public.

Budget Policy: The NICHD RMS budget request of \$56 million, a 1.0% change from the FY 2007 level and includes \$0.2 million support for the additional strategic provision for the Continuity of Operations Plan. The FY 2008 NICHD RMS activities provide administrative, budgetary, logistical, and scientific support in the review, award, and monitoring of research grants, training awards and research and development contracts. RMS functions also encompass strategic planning, coordination, and evaluation of the Institute's programs, regulatory compliance, international coordination, and liaison with other Federal agencies, Congress, and the public. The Institute currently oversees more than 2350 research project grants and centers, as well as more than 660 research and support contracts. More than 1935 NICHD research projects involve human subjects, including 436 clinical trials. This requires additional support for NICHD technology infrastructure and security operations to minimize potential financial and operational losses brought about by service interruptions. It also includes activities to ensure that the Institute continues to meet the needs of the extramural scientific community and the public.



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**Budget Authority by Object**

	FY 2007 Continuing Resolution	FY 2008 Estimate	Increase or Decrease	Percent Change
Total compensable workyears:				
Full-time employment	548	558	10	1.8
Full-time equivalent of overtime & holiday hours	2	2	0	0.0
Average ES salary	\$161	\$166	5	3.1
Average GM/GS grade	11.7	11.7	0	-0.2
Average GM/GS salary	\$83	\$86	3	3.6
Average salary, grade established by act of July 1, 1944 (42 U.S.C. 207)	\$74	\$77	3	4.1
Average salary of ungraded positions	\$162	\$166	4	2.5
<b>OBJECT CLASSES</b>	<b>FY 2007 Continuing Resolution</b>	<b>FY 2008 Estimate</b>	<b>Increase or Decrease</b>	<b>Percent Change</b>
Personnel Compensation:				
11.1 Full-Time Permanent	\$34,547	\$35,850	1,303	3.8
11.3 Other than Full-Time Permanent	17,323	17,977	654	3.8
11.5 Other Personnel Compensation	1,345	1,396	51	3.8
11.7 Military Personnel	1,995	2,597	602	30.2
11.8 Special Personnel Services Payments	15,056	15,624	568	3.8
<b>Total, Personnel Compensation</b>	<b>70,266</b>	<b>73,444</b>	<b>3,178</b>	<b>4.5</b>
12.0 Personnel Benefits	14,455	15,000	545	3.8
12.2 Military Personnel Benefits	1,547	1,605	58	3.7
13.0 Benefits for Former Personnel	0	0	0	0.0
<b>Subtotal, Pay Costs</b>	<b>86,268</b>	<b>90,049</b>	<b>3,781</b>	<b>4.4</b>
21.0 Travel & Transportation of Persons	3,402	3,402	0	0.0
22.0 Transportation of Things	533	533	0	0.0
23.1 Rental Payments to GSA	0	0	0	0.0
23.2 Rental Payments to Others	36	36	0	0.0
23.3 Communications, Utilities & Miscellaneous Charges	2,134	2,155	21	1.0
24.0 Printing & Reproduction	1,265	1,265	0	0.0
25.1 Consulting Services	1,417	1,417	0	0.0
25.2 Other Services	14,080	14,080	0	0.0
25.3 Purchase of Goods & Services from Government Accounts	133,319	131,082	-2,237	-1.7
25.4 Operation & Maintenance of Facilities	1,859	1,859	0	0.0
25.5 Research & Development Contracts	114,121	114,121	0	0.0
25.6 Medical Care	1,299	1,299	0	0.0
25.7 Operation & Maintenance of Equipment	2,589	2,589	0	0.0
25.8 Subsistence & Support of Persons	0	0	0	0.0
<b>25.0 Subtotal, Other Contractual Services</b>	<b>268,684</b>	<b>266,447</b>	<b>-2,237</b>	<b>-0.8</b>
26.0 Supplies & Materials	12,283	12,283	0	0.0
31.0 Equipment	5,026	5,026	0	0.0
32.0 Land and Structures	0	0	0	0.0
33.0 Investments & Loans	0	0	0	0.0
41.0 Grants, Subsidies & Contributions	869,396	867,068	-2,328	-0.3
42.0 Insurance Claims & Indemnities	0	0	0	0.0
43.0 Interest & Dividends	0	0	0	0.0
44.0 Refunds	0	0	0	0.0
<b>Subtotal, Non-Pay Costs</b>	<b>1,162,759</b>	<b>1,158,215</b>	<b>-4,544</b>	<b>-0.4</b>
<b>NIH Roadmap for Medical Research</b>	<b>15,179</b>	<b>16,682</b>	<b>1,503</b>	<b>9.9</b>
<b>Total Budget Authority by Object</b>	<b>1,264,206</b>	<b>1,264,946</b>	<b>740</b>	<b>0.1</b>

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

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**Salaries and Expenses**

OBJECT CLASSES	FY 2007 Continuing Resolution	FY 2008 Estimate	Increase or Decrease	Percent Change
<b>Personnel Compensation:</b>				
Full-Time Permanent (11.1)	\$34,547	\$35,850	\$1,303	3.8
Other Than Full-Time Permanent (11.3)	17,323	17,977	654	
Other Personnel Compensation (11.5)	1,345	1,396	51	3.8
Military Personnel (11.7)	1,995	2,597	602	30.2
Special Personnel Services Payments (11.8)	15,056	15,624	568	3.8
<b>Total Personnel Compensation (11.9)</b>	<b>70,266</b>	<b>73,444</b>	<b>3,178</b>	<b>4.5</b>
Civilian Personnel Benefits (12.1)	14,455	15,000	545	3.8
Military Personnel Benefits (12.2)	1,547	1,605		
Benefits to Former Personnel (13.0)	0	0	0	0.0
<b>Subtotal, Pay Costs</b>	<b>86,268</b>	<b>90,049</b>	<b>3,781</b>	<b>4.4</b>
Travel (21.0)	3,402	3,402	0	0.0
Transportation of Things (22.0)	533	533	0	0.0
Rental Payments to Others (23.2)	36	36	0	0.0
Communications, Utilities and Miscellaneous Charges (23.3)	2,134	2,155	21	1.0
Printing and Reproduction (24.0)	1,265	1,265	0	0.0
<b>Other Contractual Services:</b>				
Advisory and Assistance Services (25.1)	1,417	1,417	0	0.0
Other Services (25.2)	14,080	14,080	0	0.0
Purchases from Govt. Accounts (25.3)	0	0	0	0.0
Operation & Maintenance of Facilities (25.4)	1,859	1,859	0	0.0
Operation & Maintenance of Equipment (25.7)	2,589	2,589	0	0.0
Subsistence & Support of Persons (25.8)	0	0	0	0.0
<b>Subtotal Other Contractual Services</b>	<b>19,945</b>	<b>19,945</b>	<b>0</b>	<b>0.0</b>
Supplies and Materials (26.0)	12,283	12,283	0	0.0
<b>Subtotal, Non-Pay Costs</b>	<b>39,598</b>	<b>39,619</b>	<b>21</b>	<b>0.1</b>
<b>Total, Administrative Costs</b>	<b>125,866</b>	<b>129,668</b>	<b>3,802</b>	<b>3.0</b>

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**Authorizing Legislation**

	PHS/Act/Other Citation	U.S. Code Citation	2007 Amount Authorized	FY 2007 Continuing Resolution	2008 Amount Authorized	FY 2008 Budget Estimate
Research and Investigation	Section 301	42§241	Indefinite	\$ 15,179,000	Indefinite	\$16,682,000
National Institute of Child Health and Human Development	Section 402(a)	P.L.-109-482	Indefinite	\$1,249,027,000	Indefinite	\$1,211,165,000
<b>Total, Budget Authority</b>				<b>1,264,206,000</b>		<b>1,264,946,000</b>

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**Appropriations History**

Fiscal Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation <u>1/</u>
1999	654,248,000 <u>2/ 3/</u>	728,817,000	748,482,000	750,982,000
Rescission	0	0	0	-497,000
2000	694,114,000 <u>2/</u>	817,470,000	848,044,000	862,884,000
Rescission				-4,593,000
2001	810,501,000 <u>2/</u>	984,300,000	986,069,000	976,455,000
Rescission				-486,000
2002	1,096,650,000	1,088,208,000	1,123,692,000	1,113,605,000
Rescission				-1,931,000
2003	1,196,093,000	1,196,093,000	1,213,817,000	1,213,817,000
Rescission				-7,890,000
2004	1,245,371,000	1,245,371,000	1,251,185,000	1,250,585,000
Rescission				-8,224,000
2005	1,280,915,000	1,280,515,000	1,288,900,000	1,280,915,000
Rescission				-10,594,000
2006	1,277,544,000	1,277,544,000	1,310,989,000	1,277,544,000
Rescission				-12,775,000
2007 Continuing Resolution	1,257,418,000	1,257,418,000	1,264,500,000	1,264,206,000 <u>4/</u>
2008	1,264,946,000			

1/ Reflects enacted supplementals, rescissions, and reappropriations.

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

3/ Reflects a decrease of \$468,000 for the budget amendment for Bioterrorism

4/ Annualized current rate

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

OFFICE/DIVISION	FY 2006 Actual	FY 2007 Continuing Resolution	FY 2008 Estimate
Office of the Director	96	97	101
Center for Developmental Biology and Perinatal Medicine	19	19	19
Center for Population Research	25	25	25
Center for Research for Mothers and Children	28	28	28
National Center for Medical Rehabilitation Research	9	9	9
Division of Intramural Research	370	370	376
<b>Total</b>	<b>547</b>	<b>548</b>	<b>558</b>
Includes FTEs which are reimbursed from the NIH Roadmap for Medical Research			
FTEs supported by funds from Cooperative Research and Development Agreements	(1)	(1)	(1)
FISCAL YEAR	Average GM/GS Grade		
2004	11.3		
2005	11.8		
2006	11.6		
2007	11.7		
2008	11.7		

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**National Institute of Child Health and Human Development**

**Detail of Positions**

GRADE	FY 2006 Actual	FY 2007 Continuing Resolution	FY 2008 Estimate
Total, ES Positions	3	3	3
Total, ES Salary	471,000	482,304	496,773
GM/GS-15	38	38	38
GM/GS-14	69	69	69
GM/GS-13	41	41	42
GS-12	47	47	49
GS-11	32	32	32
GS-10	7	7	7
GS-9	27	27	27
GS-8	24	24	24
GS-7	12	12	12
GS-6	6	6	6
GS-5	4	4	4
GS-4	4	4	4
GS-3	0	0	0
GS-2	0	0	0
GS-1	0	0	0
Subtotal	311	311	314
Grades established by Act of July 1, 1944 (42 U.S.C. 207):			
Assistant Surgeon General	0	0	0
Director Grade	12	13	13
Senior Grade	3	3	3
Full Grade	6	6	6
Senior Assistant Grade	4	4	4
Assistant Grade	0	0	0
Subtotal	25	26	26
Ungraded	233	233	239
Total permanent positions	431	431	431
Total positions, end of year	572	572	572
Total full-time equivalent (FTE) employment, end of year	547	548	558
Average ES salary	156,859	160,768	165,591
Average GM/GS grade	11.6	11.7	11.7
Average GM/GS salary	81,515	83,471	85,975

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

**NATIONAL INSTITUTES OF HEALTH  
National Institute of Child Health and Human Development**

**New Positions Requested**

	FY 2008		
	Grade	Number	Annual Salary
Intramural Research	AD	6	\$50,000
Research Management and Support	GS	3	75,000
<b>Total Requested</b>		<b>9</b>	