

DEPARTMENT OF HEALTH AND HUMAN SERVICES

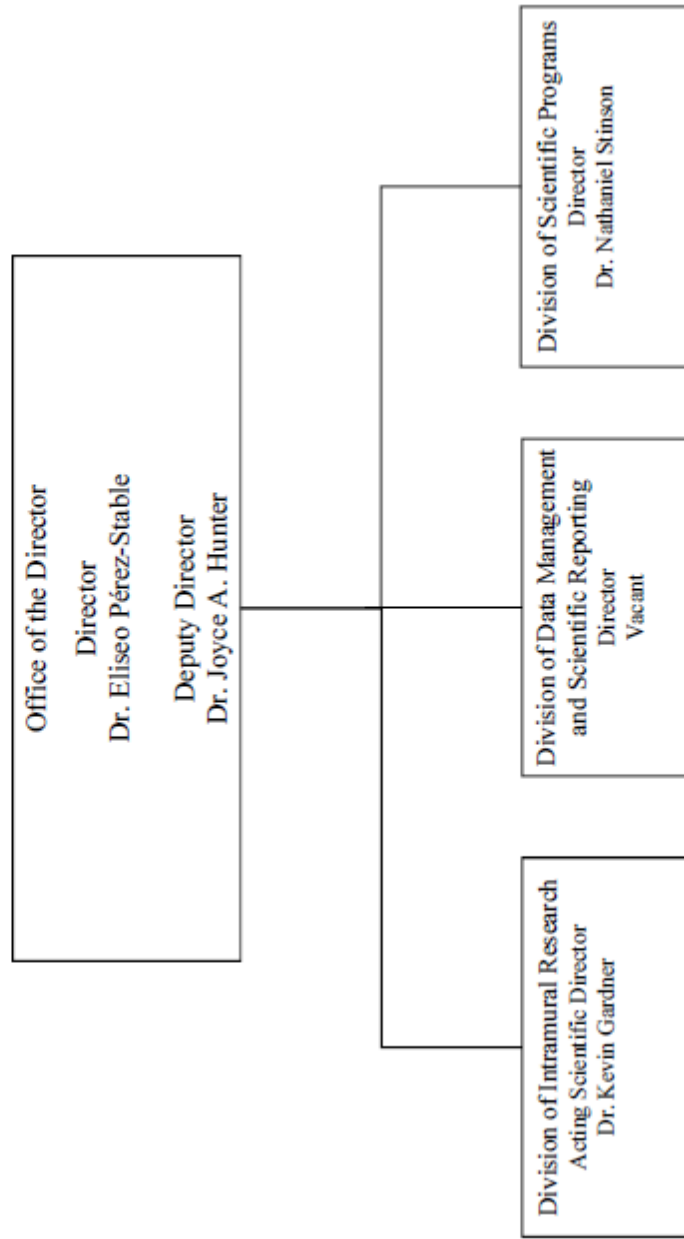
NATIONAL INSTITUTES OF HEALTH

National Institute on Minority Health and Health Disparities (NIMHD)

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NOTE: The FY 2016 Enacted funding amounts cited throughout this chapter reflect the effects of OAR HIV/AIDS Transfers.

National Institutes of Health
National Institute on Minority Health and Health Disparities
Organizational Structure



NATIONAL INSTITUTES OF HEALTH

National Institute on Minority Health and Health Disparities

For carrying out section 301 and title IV of the PHS Act with respect to minority health and health disparities research, [~~\$279,718,000~~]*\$279,680,000*.

NATIONAL INSTITUTES OF HEALTH
National Institute on Minority Health and Health Disparities

Amounts Available for Obligation¹

(Dollars in Thousands)

Source of Funding	FY 2015 Actual	FY 2016 Enacted	FY 2017 President's Budget
Appropriation	\$269,154	\$279,718	\$280,680
Mandatory Appropriation: (non-add)			
<i>Type 1 Diabetes</i>	(0)	(0)	(0)
<i>Other Mandatory financing</i>	(0)	(0)	(1,000)
Rescission	0	0	0
Sequestration	0	0	0
FY 2015 First Secretary's Transfer	0	0	0
FY 2015 Second Secretary's Transfer	0	0	0
Subtotal, adjusted appropriation	\$269,154	\$279,718	\$280,680
OAR HIV/AIDS Transfers	1,815	962	0
National Children's Study Transfers	0	0	0
Subtotal, adjusted budget authority	\$270,969	\$280,680	\$280,680
Unobligated balance, start of year	0	0	0
Unobligated balance, end of year	0	0	0
Subtotal, adjusted budget authority	\$270,969	\$280,680	\$280,680
Unobligated balance lapsing	-489	0	0
Total obligations	\$270,480	\$280,680	\$280,680

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

FY 2015 - \$326 FY 2016 - \$400 FY 2017 - \$400

**NATIONAL INSTITUTES OF HEALTH
FY 2017 Congressional Justification
NIMHD**

Budget Mechanism - Total¹

(Dollars in Thousands)

MECHANISM	FY 2015 Actual		FY 2016 Enacted		FY 2017 President's Budget ³		FY 2017 +/- FY 2016	
	No.	Amount	No.	Amount	No.	Amount	No.	Amount
Research Projects:								
Noncompeting	69	\$26,255	74	\$30,218	74	\$30,078		-\$140
Administrative Supplements	(3)	1,144	(3)	1,187	(3)	1,187		
Competing:								
Renewal								
New Supplements	30	14,487	31	14,955	31	14,761		-194
Subtotal, Competing	30	\$14,487	31	\$14,955	31	\$14,761		-\$194
Subtotal, RPGs	99	\$41,885	105	\$46,360	105	\$46,026		-\$334
SBIR/STTR	30	8,391	32	9,214	32	9,650		436
Research Project Grants	129	\$50,276	137	\$55,574	137	\$55,676		\$102
Research Centers:								
Specialized/Comprehensive	48	\$70,094	49	\$68,554	49	\$67,998		-\$556
Clinical Research		2,000		2,000		2,000		
Biotechnology								
Comparative Medicine								
Research Centers in Minority Institutions	23	54,641	24	56,759	24	56,759		
Research Centers	71	\$126,735	73	\$127,313	73	\$126,757		-\$556
Other Research:								
Research Careers	4	\$888	5	\$895	5	\$895		
Cancer Education								
Cooperative Clinical Research								
Biomedical Research Support								
Minority Biomedical Research Support								
Other	100	53,231	102	54,972	102	54,972		
Other Research	104	\$54,119	107	\$55,867	107	\$55,867		
Total Research Grants	304	\$231,130	317	\$238,754	317	\$238,300		-\$454
Ruth L. Kirchstein Training Awards:	FTTPs		FTTPs		FTTPs		FTTPs	
Individual Awards	2	\$73	2	\$75	2	\$77		\$2
Institutional Awards	3		3		3			
Total Research Training	2	\$76	2	\$78	2	\$80		\$2
Research & Develop. Contracts <i>(SBIR/STTR) (non-add)²</i>	154	\$17,670 (70)	154	\$19,203 (73)	154	\$19,203 (73)		
Intramural Research	6	\$6,612	6	\$6,777	6	\$6,913		\$136
Res. Management & Support <i>Res. Management & Support (SBIR Admin) (non-add)²</i>	57	15,481	58	15,868	58	16,185		317
<i>Office of the Director - Appropriation²</i>								
Office of the Director - Other								
ORIP/SEPA (non-add) ²								
Common Fund (non-add) ²								
Buildings and Facilities								
<i>Appropriation</i>								
Type 1 Diabetes								
Program Evaluation Financing								
Cancer Initiative Mandatory Financing								
Other Mandatory Financing						-1,000		-1,000
Subtotal, Labor/HHS Budget Authority		\$270,969		\$280,680		\$279,680		-\$1,000
Interior Appropriation for Superfund Res.								
Total, NIH Discretionary B.A.		\$270,969		\$280,680		\$279,680		-\$1,000
Type 1 Diabetes								
Proposed Law Funding								
Cancer Initiative Mandatory Financing								
Other Mandatory Financing						1,000		1,000
Total, NIH Budget Authority		\$270,969		\$280,680		\$280,680		
Program Evaluation Financing								
Total, Program Level		\$270,969		\$280,680		\$280,680		

¹ All Subtotal and Total numbers may not add due to rounding.
² All numbers in italics and brackets are non-add.
³ Includes mandatory financing.

Major Changes in the Fiscal Year 2017 President's Budget Request

Major changes by budget mechanism and/or budget activity detail are briefly described below. The FY 2017 President's Budget request for NIMHD is the same as the FY 2016 Enacted level of \$280.680 million.

Research Centers (-\$0.556 million; total \$126.757 million):

As several programs end in FY 2016, including Centers of Excellence initiatives, NIMHD is shifting its strategic investments to research project grants, intramural research, and research management support in an effort to combat elevated operational costs.

**NATIONAL INSTITUTES OF HEALTH
National Institute on Minority Health and Health Disparities**

Summary of Changes

(Dollars in Thousands)

FY 2016 Enacted				\$280,680
FY 2017 President's Budget				\$280,680
Net change				\$0
CHANGES	FY 2017 President's Budget ¹		Change from FY 2016	
	FTEs	Budget Authority	FTEs	Budget Authority
<u>A. Built-in:</u>				
<u>1. Intramural Research:</u>				
a. Annualization of January 2016 pay increase & benefits		\$1,026		\$0
b. January FY 2017 pay increase & benefits		1,026		0
c. Two less days of pay		1,026		0
d. Differences attributable to change in FTE		1,026		0
e. Payment for centrally furnished services		994		0
f. Increased cost of laboratory supplies, materials, other expenses, and non-recurring costs		4,893		0
Subtotal				\$0
<u>2. Research Management and Support:</u>				
a. Annualization of January 2016 pay increase & benefits		\$8,106		\$0
b. January FY 2017 pay increase & benefits		8,106		0
c. Two less days of pay		8,106		0
d. Differences attributable to change in FTE		8,106		0
e. Payment for centrally furnished services		314		0
f. Increased cost of laboratory supplies, materials, other expenses, and non-recurring costs		7,765		0
Subtotal				\$0
Subtotal, Built-in				\$0

NATIONAL INSTITUTES OF HEALTH
National Institute on Minority Health and Health Disparities

Summary of Changes - Continued

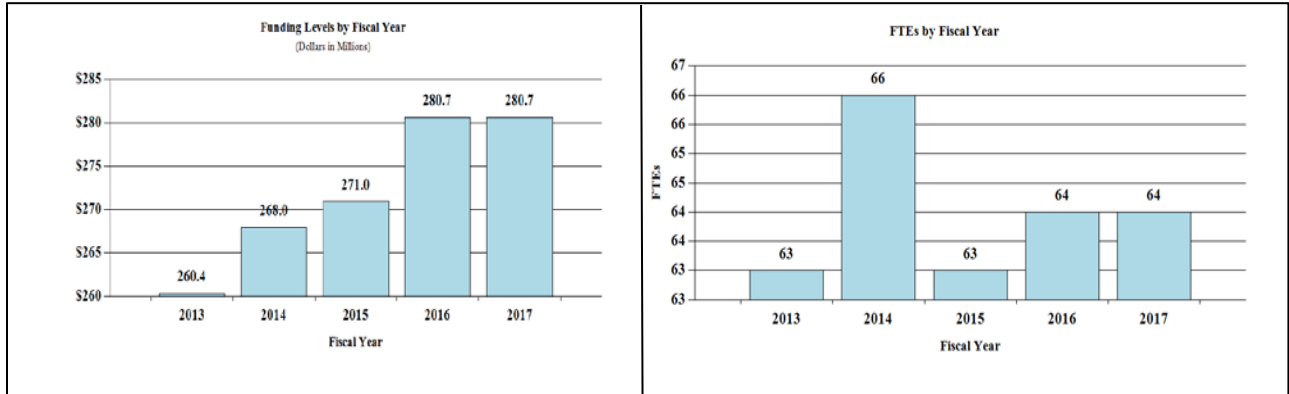
(Dollars in Thousands)

CHANGES	FY 2017 President's Budget ¹		Change from FY 2016	
	No.	Amount	No.	Amount
<u>B. Program</u>				
<u>1. Research Project Grants:</u>				
a. Noncompeting	74	\$31,265	0	-\$140
b. Competing	31	14,761	0	-194
c. SBIR/STTR	32	9,650	0	436
Subtotal, RPGs	137	\$55,676	0	\$102
2. Research Centers	73	\$126,757	0	-\$556
3. Other Research	107	55,867	0	0
4. Research Training	2	80	0	2
5. Research and development contracts	154	19,203	0	0
Subtotal, Extramural		\$257,582		-\$453
6. Intramural Research	<u>FTEs</u> 6	\$6,913	<u>FTEs</u> 0	\$136
7. Research Management and Support	58	16,185	0	317
8. Construction		0		0
9. Buildings and Facilities		0		0
Subtotal, Program	64	\$280,680	0	\$0
Total changes				\$0

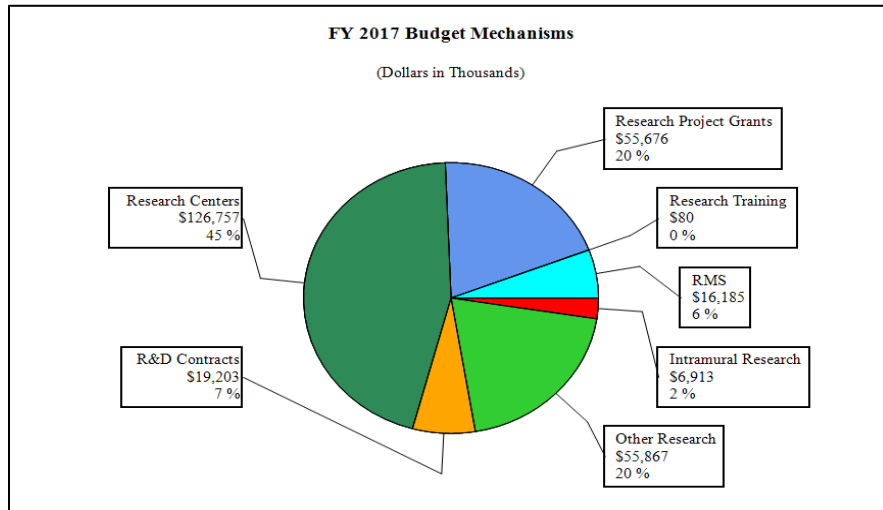
¹ Includes mandatory financing.

Fiscal Year 2017 Budget Graphs

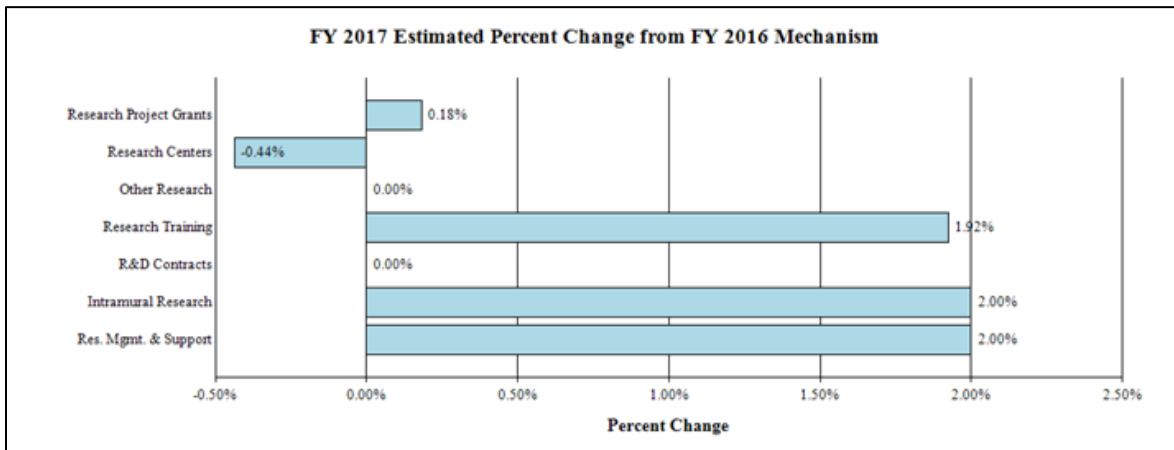
History of Budget Authority and FTEs:



Distribution by Mechanism (Dollars in Thousands):



Change by Selected Mechanism:



NATIONAL INSTITUTES OF HEALTH
National Institute on Minority Health and Health Disparities

Budget Authority by Activity¹
(Dollars in Thousands)

	FY 2015 Actual		FY 2016 Enacted		FY 2017 President's Budget ²		FY 2017 +/- FY2016	
	<u>FTE</u>	<u>Amount</u>	<u>FTE</u>	<u>Amount</u>	<u>FTE</u>	<u>Amount</u>	<u>FTE</u>	<u>Amount</u>
Extramural Research								
<u>Detail</u>								
Basic, Social & Behavioral Research		\$72,174		\$79,991		\$79,850		-\$141
Transdisciplinary & Translational Research		74,663		85,152		82,426		-2,726
Research Capacity-Building & Infrastructure		84,618		69,669		69,547		-122
Career Development & Training		17,421		23,223		25,758		2,535
Subtotal, Extramural		\$248,876		\$258,035		\$257,582		-\$453
Intramural Research	6	\$6,612	6	\$6,777	6	\$6,913	0	\$136
Research Management & Support	57	\$15,481	58	\$15,868	58	\$16,185	0	\$317
TOTAL	63	\$270,969	64	\$280,680	64	\$280,680	0	\$0

¹ Includes FTEs whose payroll obligations are supported by the NIH Common Fund.

² Includes mandatory financing.

NATIONAL INSTITUTES OF HEALTH
National Institute on Minority Health and Health Disparities

Authorizing Legislation

	PHS Act/ Other Citation	U.S. Code Citation	2016 Amount Authorized	FY 2016 Enacted	2017 Amount Authorized	FY 2017 President's Budget¹
Research and Investigation	Section 301	42§241	Indefinite	\$280,680,000	Indefinite	\$279,680,000
National Institute on Minority Health and Health Disparities	Section 401(a)	42§281	Indefinite		Indefinite	
Total, Budget Authority				\$280,680,000		\$279,680,000

¹Excludes mandatory financing

NATIONAL INSTITUTES OF HEALTH
National Institute on Minority Health and Health Disparities

Appropriations History

Fiscal Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
2007	\$194,299,000	\$194,299,000	\$196,771,000	\$199,444,000
Rescission				\$0
2008	\$194,495,000	\$202,691,000	\$203,895,000	\$203,117,000
Rescission				\$3,548,000
Supplemental				\$1,061,000
2009	\$199,762,000	\$206,632,000	\$205,322,000	\$205,959,000
Rescission				\$0
2010	\$208,844,000	\$213,316,000	\$209,508,000	\$211,572,000
Rescission				\$0
2011	\$219,046,000		\$218,705,000	\$211,572,000
Rescission				\$1,857,728
2012	\$214,608,000	\$214,608,000	\$272,650,000	\$276,963,000
Rescission				\$523,460
2013	\$279,389,000		\$280,236,000	\$276,439,540
Rescission				\$552,879
Sequestration				(\$13,875,364)
2014	\$283,299,000		\$281,416,000	\$268,322,000
Rescission				\$0
2015	\$267,953,000			\$269,154,000
Rescission				\$0
2016	\$281,549,000	\$272,493,000	\$287,379,000	\$279,718,000
Rescission				\$0
2017 ¹	\$280,680,000			

¹ Includes mandatory financing.

Justification of Budget Request

National Institute on Minority Health and Health Disparities

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

Budget Authority:

	FY 2015 Actual	FY 2016 Enacted	FY 2017 Budget Request	FY 2016 + / - FY 2015
BA	\$270,969,000	\$280,680,000	\$280,680,000	\$0
FTE	63	64	64	0

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

Director's Overview

The mission of the National Institute on Minority Health and Health Disparities (NIMHD) is to lead scientific research to improve minority health and to reduce health disparities. NIMHD's foundation rests on the reality that in the United States many racial and ethnic minority populations experience poorer health and greater disparities in health. The central core of health disparities research involves identifying how race, ethnicity, and socioeconomic status interact with health determinants, such as social determinants, individual behaviors, the physical environment, and biological systems, to lead to differential clinical outcomes. One of the domains of NIMHD's mission is focused on research that seeks to define the factors that contribute to these different health outcomes. Another domain is the science of health disparities research that encompasses multidisciplinary approaches to define the contributions of health determinants to health disparities among different population groups, including racial and ethnic minority, rural, and low socioeconomic status populations.

NIMHD's research foci are to define how health determinants lead to disparities in clinical outcomes; to develop and validate standard measures, methods, and metrics; and to test research interventions to address the factors contributing to health disparities. The causes for health disparities are multifaceted and span the spectrum of population, socio-behavioral, clinical, and basic sciences. These determinants have traditionally focused on social factors, such as formal education and income, as well as individual behaviors, like nutritional habits, tobacco smoking, and substance use. The importance of other social determinants, such as the physical environment, early life experiences, social support, structural discrimination, and access to quality health care has become increasingly relevant in understanding and ameliorating health disparities. Furthermore, research shows that despite disadvantaged social conditions, some populations have better health outcomes than would be predicted, which underscores the need for the study on resilience or protective factors as part of the NIMHD agenda. Finally, understanding the biological factors that contribute to disparities in health outcomes adds a novel dimension to health disparities research.

NIMHD will continue to play a collaborative role with the other NIH ICs to address gaps in scientific research related to understanding specific areas of the health care systems and health care service delivery to minority and health disparity populations. The quality and type of health care services received may play an integral role in prevention and clinical care, especially as the proportion of uninsured individuals in the population continues to decrease, and the long-term management of chronic diseases increases. Clinicians, health care teams, and health care systems have a central role in the delivery of effective and quality medical care. Impacting these systems has the potential to address health disparities and promote health equity in ways that have not been fully explored.

Health disparities continue to persist. In addition, new challenges in the field are expected to emerge as the number of individuals from diverse populations in the United States increases. In an effort to accelerate progress towards meeting these challenges, NIMHD, as the NIH Institute most focused in this area, is forging new directions in defining the science of health disparities research. For example, determinants of health show tremendous complexity, impacting different population groups in different ways and contributing to different health consequences. By facilitating research into these interactions, tailored interventions can be designed that take into account multiple factors to reduce adverse health outcomes. This strategy shows promise to address current and emerging health disparities by generating critical resources, tools, databases, foundational theories, and methodologies for advancing the science of health disparities. By further defining the science of health disparities and minority health research in this way, the scientific field at large will utilize similar strategies that can foster concentrated research efforts focused on generating evidence-based knowledge and targeted interventions.

Foundation for Discoveries: Basic Research

NIMHD supports basic research to improve the health of minority populations and reduce health disparities. For instance, African American men experience disproportionate incidence of and mortality from prostate cancer. A recent NIMHD study used a three-dimensional co-culture model of human prostate cancer cells to identify a cohort of miRNAs associated with the progression to advanced prostate cancer disease, which may play a role in this disparity.

The Promise of Precision Medicine

NIH has proposed the launch of the Precision Medicine Initiative Cohort (PMIC) program, a national research cohort of one million or more Americans to propel the understanding of health and disease forward and set the foundation for a new way of doing research through engaged participants and open, responsible data sharing. However, the potential for reducing health disparities hinges on 1) better understanding of the dynamic interplay between biological, behavioral, social and environmental health risk and protective factors experienced across the life course; and 2) greater inclusion of health disparity populations in research aimed at developing precision medicine interventions. To further support PMIC efforts, NIMHD promotes precision medicine health disparities research, which includes: 1) development of new tools and analytic methods for integrating patient data with information about contextual factors acting at the community or population level to influence health; 2) development of pharmacogenomic and other precision medicine tools to identify critical biomarkers for disease progression and drug responses in diverse populations; 3) translation of new

discoveries into clinical practice with minority patients; and/or 4) investigation of facilitators and barriers to implementing precision medicine approaches in disadvantaged populations.

Applying Big Data and Technology to Improve Health

NIMHD's Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) projects have generated new knowledge and technologies that can advance the health of populations suffering from health disparities. A small business concern under the SBIR program developed an iPod-sized low-intensity system that can deliver portable, convenient, and effective osteoarthritis therapy for long durations showing clinical improvement in pain relief in individuals with osteoarthritis of the knee. This could help rural and other underserved populations access treatment. In addition, NIMHD has embarked on improving the trans-NIH disease category coding by differentiating between minority health and health disparities research projects in reporting across NIH as mandated by legislation. NIH also is working to improve the tracking of trainees in order to ensure a diverse workforce, as well as monitoring the research topics of trainees from all backgrounds to identify those who do health disparities research. NIMHD also seeks to work with all NIH-supported relevant databases to improve the inclusion of diverse populations in national data systems, in order to foster the analysis of relevant genomic and biological information that provides the foundation for translational research targeted at improving minority health.

Stewardship to Inspire Public Trust

NIMHD has implemented several strategies over the last year to enhance its transparency. One strategy was to improve the NIMHD website and social media presence to provide more relevant and in-depth information to grantees and the public. Currently, NIMHD is undergoing a scientific visioning process that includes public input through a Request for Information to guide the direction of NIMHD's future minority health and health disparities research. The NIMHD scientific visioning process will become the foundation for the NIH minority health and health disparities strategic plan.

Overall Budget Policy:

The FY 2017 President's Budget request is the same level as the FY 2016 Enacted level of \$280.680 million.

Program Descriptions and Accomplishments

Priorities for NIMHD programs include examining the causes of health disparities from a systems approach; developing tailored interventions based upon the health determinant findings for specific population groups; integrating science, practice, and policy approaches; providing platforms for academic institutions to conduct research and train a diverse workforce; building community research capacity; investigating national and global patterns of health disparities; and advancing the translation and dissemination of research results. NIMHD supports a health determinant research framework to study various diseases and conditions, including diabetes and cancer, in order to foster a better understanding of what causes health disparities so that interventions can target critical contributors more effectively.

Basic, Social, and Behavioral Research

NIMHD is committed to reducing health disparities by supporting biomedical, social, behavioral, clinical, and population research. This research enhances knowledge about minority health and about diseases and conditions with differential health outcomes for disadvantaged population groups. These programs also increase the evidence base for interventions to reduce health disparities and seek to improve the quality and length of life for all populations.

The research program focuses on fundamental biological and social mechanisms involved in disease conditions that disproportionately affect racial and ethnic minority populations and other health disparity populations, as well as clinical therapies or interventions that can directly or demonstrably contribute to reducing health disparities. The SBIR and STTR programs support innovative health education, disease prevention, and collaborative community-based, problem-driven research. An example of achievement is the development of the *EyeSite* visual acuity-screening kiosk prototype that demonstrated efficacy in reaching low-income, high-health disparity populations, with more than 109,000 uses in less than 9 months of testing. The prototype was modified into a multifunctional health and wellness screening kiosk that focused on risk factors that disproportionately impact African Americans and Hispanics/Latinos, including high blood pressure, obesity, stress, and diet and exercise behaviors. The screening kiosks have been placed in high traffic retail locations, thus providing easy access to free health screenings.

Key to NIMHD's basic, social, and behavioral research is the use of community-based participatory research (CBPR), which creates partnerships between community organizations and academic institutions to tailor research, from identifying a research question, to research design, through implementation. For example, the Healing of the Canoe project enabled investigators from the University of Washington, in collaboration with Suquamish and Port Gamble S'Klallam tribes, to develop a culturally-grounded social skills intervention to promote well-being and prevent substance abuse among Native youth. The research was initiated by the Suquamish Tribe and is based on the Canoe Journey, a major factor in cultural revitalization among Pacific Northwest coastal tribes. The intervention increased cultural identity, cultural practices, hope, and self-efficacy, and decreased substance use in Native youth.

In another project, research from Sloan-Kettering Institute, in partnership with the South Asian Council for Social Services, is examining strategies to address the health needs of the New York City taxi driver community. The project implemented a health workshop at John F. Kennedy International Airport that provided health screening, education, and counseling to taxi drivers. Results indicate that the majority of the 466 drivers had unmet health needs requiring follow-up care, including 32 percent requiring urgent follow-up. Of those requiring follow-up, 41 percent sought medical care following the workshop, indicating that this intervention can promote appropriate healthcare seeking in these individuals from underserved populations. In both examples, underserved populations' needs may have remained unmet if a CBPR approach to health disparities research had not been supported by NIMHD.

Budget Policy:

The FY 2017 President Budget's request is \$79.850 million, a decrease of \$0.141 million or 0.18 percent compared to the FY 2016 Enacted level.

Program Portrait: Impacting Health Disparities through Investigator-Initiated Research

FY 2016 Level: \$8.2 million

FY 2017 Level: \$7.7 million

Change: -\$0.5 million

NIMHD is expanding the use of the investigator-initiated approach to generate new knowledge and innovative strategies to enhance minority health and health disparities research, as well as generate efficient and effective interventions to improve minority health and to reduce health disparities. The value of this strategy is underscored by the following examples:

One NIMHD-supported, investigator-initiated research project examined the effects of perinatal exposure to environmental pollution and psychosocial stress on behavioral and cognitive development in low-income urban children. Findings indicate that intergenerational transmission of post-traumatic stress disorder (PTSD) is largely explained by the quality of the mother-infant attachment. Insecure or avoidant attachment of infants was associated with risk of PTSD diagnosis in adolescence, and disorganized attachment was associated with higher overall PTSD symptoms in adolescence compared to infants with secure attachments. These results highlight the importance of treating PTSD of mothers during pregnancy and supporting secure mother-child attachment early in infancy, particularly in populations at high risk for trauma exposure and subsequent health disparities in PTSD.

Another project developed an internet-based health communication intervention to improve pre-conception health for African American women aged 18-25. The online system provides personalized health information through interaction with an animated avatar, which uses an automated indexing algorithm to select personal stories from other women who have received the intervention, deemed most relevant to the user's situation and readiness to change her health behavior. Results indicate that the animated avatar is perceived as a trustworthy and knowledgeable source of health information that can help participants make better decisions to improve their health.

A third study used local, state, and national datasets to examine racial, ethnic, nativity, and geographic differences in mortality among different Asian subpopulations in the United States. Results indicate particularly high rates of mortality due to heart disease for Asian Indians, growing mortality due to cancer and diabetes in Asian Indians and Vietnamese, and increased suicide mortality in Koreans. This research demonstrates the importance of also examining health outcomes of Asians by national origin groups.

Transdisciplinary and Translational Research

NIMHD supports interdisciplinary, translational, and collaborative approaches to health disparities research that are needed to advance the understanding of the multi-factorial, integrated causes of health disparities. A center-based approach often serves as the optimum infrastructure to address these associated complexities, and to foster networks of investigators across disciplines to address minority health and health disparities issues fully. One program in this section includes the Transdisciplinary Collaborative Centers for Health Disparities Research (TCC), which are regional coalitions of stakeholders focused on developing coordinated, interdisciplinary approaches to health disparities problems.

A transdisciplinary, translational approach is important for addressing complex minority health issues. Childhood asthma prevalence and morbidity varies among Hispanic/Latino populations in the United States, with Puerto Ricans having the worst outcomes and Mexicans the best outcomes. To determine whether genetic ancestry plays a role in this variation, one project analyzed 5,493 Latinos with and without asthma using genome-wide data to estimate each participant's proportion of African, European, and Indigenous American ancestry. After adjusting for other variables such as early life exposures, air pollution, and socioeconomic status,

the research found that Indigenous American ancestry is associated with lower odds of asthma, while African ancestry is associated with higher odds. Also, African ancestry is associated with lower lung function among Hispanic/Latino children with asthma. These results indicate that differences in genetic ancestry can partially explain disparities in asthma susceptibility and lung function among Hispanics/Latinos of different national origins.

In FY 2017, NIMHD anticipates funding up to three Transdisciplinary Collaborative Centers for Health Disparities Research focused on precision medicine. These centers will engage in research exploring the potential for precision medicine to promote health equity and reduce health disparities. Priorities include development of new tools and analytic methods for integrating patient data with information about social and environmental determinants of health; development of ways to identify critical biomarkers for disease progression and drug responses in diverse populations; translation of drug discoveries into effective treatment or clinical practice; and investigation of facilitators and barriers to implementing precision medicine approaches in disadvantaged populations.

Budget Policy:

The FY 2017 President Budget's request is \$82.426 million, a decrease of \$2.726 million or 3.20 percent compared to the FY 2016 Enacted level.

Research Capacity Building and Infrastructure

NIMHD aims to build a comprehensive and diverse biomedical research base of institutions and individuals dedicated to reducing health disparities and erecting the policy scaffolding necessary to allow research and healthcare systems to address population differences. Institutions must possess sufficient research capacity to conduct biomedical research and translate those findings into action, including physical infrastructure, human capital, and encompassing policies. Programs within this area enable non-research intensive institutions to build research capacity to conduct health disparities research, train a diverse pool of national and global health disparities researchers, and examine health care systems and policies in order to improve capacity of health care delivery for diverse populations. This funding supports developing core research resources, building collaborations with research intensive institutions, enhancing the ability of health services organizations to care for underserved populations, and establishing policies that allow population-based research and care.

The Research Centers in Minority Institutions (RCMI) Translational Research Network Accelerating Excellence in Translational Science (AXIS) program was instrumental in building research capacity at Charles R. Drew University of Medicine and Science. Research funded by AXIS identified a link between low levels of vitamin D and high risk of myocardial infarction, even after controlling for factors associated with coronary artery disease. Using cardiac myoblasts, NIMHD-funded investigators have discovered an association between vitamin D and the development of heart cells through changes in the *WNT* gene pathway. These results indicate the importance of vitamin D repletion in cardiac cell therapy to improve heart cell development after a heart attack. This work has important implications for African Americans and other populations that often have low vitamin D levels.

The RCMI Translational Research Network Puerto Rico Clinical and Translational Research Consortium (PRCTRC) enhanced research capacity at the University of Puerto Rico. NIMHD-funded research in this program found that brain tumors called astrocytomas are the most common type of adult primary central nervous system tumors, representing 76 percent of all primary brain tumors in Puerto Ricans. This study found several miRNAs in the Puerto Rican population that allowed researchers to be able to identify different grades of tumor, which may allow for better patient treatment. In addition, the research found miRNAs that were not previously associated with brain tumors and may be considered for molecular targets for astrocytoma treatment, particularly for glioblastomas.

Budget Policy:

The FY 2017 President Budget's request is \$69.547 million, a decrease of \$0.122 million or 0.18 percent compared to the FY 2016 Enacted level.

Career Development and Training

NIMHD addresses the compelling need to promote diversity in the biomedical, behavioral, clinical, and social sciences workforce through a number of training and career development programs. A diverse biomedical workforce will improve the Nation's capacity to address and reduce health disparities by improving the quality of the educational and training environment, enhancing recruitment of the most talented researchers from all groups into health disparities research, broadening perspectives in setting research priorities, and increasing the recruitment of participants from diverse backgrounds into clinical research protocols. NIMHD programs support undergraduate and graduate students, postdoctoral researchers, and early career scientists and provide educational, mentoring, and career development programs for individuals interested in health disparities research.

The Minority Health and Health Disparities International Research Training (MHIRT) program provides diverse undergraduate and graduate students at U.S. universities with short-term research training opportunities at international sites. The exposure to international research and health disparities around the world provides invaluable training for future health disparities researchers in the United States. MHIRT trainees have conducted research on web-mapping tools to assess the risk of hepatocellular carcinoma in individuals exposed to hepatitis B, C, and/or D in Brazil; clinical depression screening tool development, implementation, and assessment in HIV-positive teens and their caretakers in Uganda; programs to assist community health workers creating public health initiatives to reduce diseases caused by unsanitary conditions in slum dwellings in Kenya; chemotherapy drug testing on cancer cells in Thailand; and new non-invasive technology to permit physical examination and physiological data collection from persons at high risk for coronary heart disease in New Zealand.

Budget Policy:

The FY 2017 President Budget's request is \$25.758 million, an increase of \$2.535 million or 10.92 percent compared to the FY 2016 Enacted level. Expansion of NIH Pathway to Independence Awards will facilitate transition of early stage investigators from mentored research to an independent research career. In addition, participation in Ruth L. Kirschstein National Research Service Award Institutional Research Training Grants is a means of developing talented, NIH-supported independent investigators in health disparities research.

Program Portrait: Ruth L. Kirschstein National Research Service Award

FY 2016 Level: \$0.06 million

FY 2017 Level: \$0.02 million

Change: -\$0.04 million

The Ruth L. Kirschstein National Research Service Awards (NRSA) support the training of predoctoral and postdoctoral researchers to develop a diverse and highly trained workforce capable and committed to biomedical, behavioral, and clinical research. NRSA fellowship awards enable promising students to obtain individualized, mentored research training from outstanding faculty sponsors, while conducting research in minority health or health disparities.

NIMHD awarded its first NRSA Individual Predoctoral Fellowships in FY 2015. Research activities of the fellows will focus on HIV and HIV risk factors in Hispanic/Latina daughters and mothers, and on the reduction of health disparities through efforts to improve access to care. In addition, postdoctoral fellows were supported via the Pathway to Independence Awards to study tobacco-related health disparities and development of novel cessation efforts, and community-based, life management interventions for stroke. In FY 2017, NIMHD will support six to eight additional NRSA awards.

Intramural Research Program (IRP)

IRP supports integrative and multidisciplinary research focused on clinical/translational, population, and social/behavioral sciences. The field of health disparities research represents a critically important concept in public health and biomedical research. Research supported by IRP focuses on diseases that have significant health disparities. In FY 2017, IRP's research agenda will address a wide array of health problems that disproportionately affect health disparity populations. Current efforts focus on tobacco use, cancer, and diabetes.

Currently, the first Stadtman Investigator at NIMHD has initiated a pioneering research laboratory designed to examine the decision-making of lower socioeconomic status individuals in response to health information. This work involves research that pertains to the role of emerging tobacco products, such as electronic cigarettes, on tobacco smoking behaviors and is based on previous research into the perceptions and use of these products among young adults.

In FY 2017, IRP will build capacity with a vision of conducting population-based social, behavioral, and epidemiological research. Senior leadership will be recruited to lead IRP. The program will develop a flagship project involving primary data collection focused on a disparity population to be defined. IRP also will take advantage of existing secondary data to address questions about how health determinants affect disadvantaged populations and the development of disparities in clinical outcomes. With renewed senior scientific leadership, IRP will provide a unique opportunity for post-doctoral scholars, medical students, and junior scientists with a special emphasis on promoting diversity in the biomedical workforce. IRP is committed to training researchers to study health disparities.

IRP plans to develop and build research collaborations across NIH Institutes and Centers (ICs) to highlight the role that disparity research can play in impacting health across NIH. NIMHD anticipates establishing collaborative relationships with established investigators at other ICs who are conducting clinical and socio-behavioral research on disparity populations. NIMHD also plans to support diverse new investigators and post-doctoral scholars based at other NIH ICs

who are addressing topics on minority health and health disparities. This will facilitate the establishment of a community of disparities scholars across NIH.

Budget Policy:

The FY 2017 President Budget's request is \$6.913 million, an increase of \$0.136 million or 2.0 percent compared to the FY 2016 Enacted level.

Research Management and Support (RMS)

RMS activities provide support for the review, award, and monitoring of research grants, training awards, and research and development contracts. The functions of RMS encompass strategic planning, coordination, and evaluation of NIMHD's programs. The RMS budget also supports NIMHD's overall science planning and policy-related activities, public reporting, and public communications. In FY 2017, RMS activities will continue to include efforts to manage and update website content, which will include a data portal, to communicate and disseminate the most current information effectively to the public and the many constituencies invested in the outcomes of NIMHD research.

Budget Policy:

The FY 2017 President Budget's request is \$16.185 million, an increase of \$0.317 million or 2.0 percent compared to the FY 2016 Enacted level.

NATIONAL INSTITUTES OF HEALTH
National Institute on Minority Health and Health Disparities

Budget Authority by Object Class¹

(Dollars in Thousands)

	FY 2016 Enacted	FY 2017 President's Budget²	FY 2017 +/- FY 2016
Total compensable workyears:			
Full-time employment	64	64	0
Full-time equivalent of overtime and holiday hours	0	0	0
Average ES salary	\$0	\$0	\$0
Average GM/GS grade	13.4	13.4	0.0
Average GM/GS salary	\$100	\$101	\$1
Average salary, grade established by act of July 1, 1944 (42 U.S.C. 207)	\$104	\$105	\$1
Average salary of ungraded positions	\$139	\$142	\$3
OBJECT CLASSES	FY 2016 Enacted	FY 2017 President's Budget²	FY 2017 +/- FY 2016
Personnel Compensation			
11.1 Full-Time Permanent	\$5,421	\$5,462	\$41
11.3 Other Than Full-Time Permanent	844	850	6
11.5 Other Personnel Compensation	109	109	1
11.7 Military Personnel	313	315	2
11.8 Special Personnel Services Payments	221	222	2
11.9 Subtotal Personnel Compensation	\$6,907	\$6,960	\$53
12.1 Civilian Personnel Benefits	\$1,993	\$2,033	\$39
12.2 Military Personnel Benefits	138	139	1
13.0 Benefits to Former Personnel	0	0	0
Subtotal Pay Costs	\$9,038	\$9,132	\$93
21.0 Travel & Transportation of Persons	\$188	\$191	\$3
22.0 Transportation of Things	51	52	1
23.1 Rental Payments to GSA	0	0	0
23.2 Rental Payments to Others	0	0	0
23.3 Communications, Utilities & Misc. Charges	120	122	2
24.0 Printing & Reproduction	0	0	0
25.1 Consulting Services	\$660	\$672	\$12
25.2 Other Services	1,379	1,404	25
25.3 Purchase of goods and services from government accounts	18,233	19,926	1,693
25.4 Operation & Maintenance of Facilities	\$474	\$483	\$9
25.5 R&D Contracts	9,515	9,686	171
25.6 Medical Care	0	0	0
25.7 Operation & Maintenance of Equipment	54	55	1
25.8 Subsistence & Support of Persons	0	0	0
25.0 Subtotal Other Contractual Services	\$30,316	\$32,226	\$1,911
26.0 Supplies & Materials	\$152	\$155	\$3
31.0 Equipment	239	243	4
32.0 Land and Structures	0	0	0
33.0 Investments & Loans	0	0	0
41.0 Grants, Subsidies & Contributions	240,577	238,559	-2,017
42.0 Insurance Claims & Indemnities	0	0	0
43.0 Interest & Dividends	0	0	0
44.0 Refunds	0	0	0
Subtotal Non-Pay Costs	\$271,642	\$271,548	-\$93
Total Budget Authority by Object Class	\$280,680	\$280,680	\$0

¹ Includes FTEs whose payroll obligations are supported by the NIH Common Fund.

² Includes mandatory financing.

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

OBJECT CLASSES	FY 2016 Enacted	FY 2017 President's Budget	FY 2017 +/- FY 2016
Personnel Compensation			
Full-Time Permanent (11.1)	\$5,421	\$5,462	\$41
Other Than Full-Time Permanent (11.3)	844	850	6
Other Personnel Compensation (11.5)	109	109	1
Military Personnel (11.7)	313	315	2
Special Personnel Services Payments (11.8)	221	222	2
Subtotal Personnel Compensation (11.9)	\$6,907	\$6,960	\$53
Civilian Personnel Benefits (12.1)	\$1,993	\$2,033	\$39
Military Personnel Benefits (12.2)	138	139	1
Benefits to Former Personnel (13.0)	0	0	0
Subtotal Pay Costs	\$9,038	\$9,132	\$93
Travel & Transportation of Persons (21.0)	\$188	\$191	\$3
Transportation of Things (22.0)	51	52	1
Rental Payments to Others (23.2)	0	0	0
Communications, Utilities & Misc. Charges (23.3)	120	122	2
Printing & Reproduction (24.0)	0	0	0
Other Contractual Services:			
Consultant Services (25.1)	660	672	12
Other Services (25.2)	1,379	1,404	25
Purchases from government accounts (25.3)	10,588	10,894	306
Operation & Maintenance of Facilities (25.4)	474	483	9
Operation & Maintenance of Equipment (25.7)	54	55	1
Subsistence & Support of Persons (25.8)	0	0	0
Subtotal Other Contractual Services	\$13,156	\$13,508	\$352
Supplies & Materials (26.0)	\$152	\$155	\$3
Subtotal Non-Pay Costs	\$13,666	\$14,028	\$362
Total Administrative Costs	\$22,705	\$23,159	\$455

NATIONAL INSTITUTES OF HEALTH
National Institute on Minority Health and Health Disparities

Detail of Full-Time Equivalent Employment (FTE)

OFFICE/DIVISION	FY 2015 Actual			FY 2016 Est.			FY 2017 Est.		
	Civilian	Military	Total	Civilian	Military	Total	Civilian	Military	Total
Division of Data Management and Scientific Reporting									
Direct:	1	-	1	1	-	1	1	-	1
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	1	-	1	1	-	1	1	-	1
Division of Intramural Research									
Direct:	3	1	4	3	1	4	3	1	4
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	3	1	4	3	1	4	3	1	4
Division of Scientific Programs									
Direct:	16	2	18	16	2	18	16	2	18
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	16	2	18	16	2	18	16	2	18
Office of the Director									
Direct:	40	-	40	41	-	41	41	-	41
Reimbursable:	-	-	-	-	-	-	-	-	-
Total:	40	-	40	41	-	41	41	-	41
Total	60	3	63	61	3	64	61	3	64
Includes FTEs whose payroll obligations are supported by the NIH Common Fund.									
FTEs supported by funds from Cooperative Research and Development Agreements.	0	0	0	0	0	0	0	0	0
FISCAL YEAR	Average GS Grade								
2013	12.7								
2014	11.7								
2015	12.8								
2016	13.4								
2017	13.4								

NATIONAL INSTITUTES OF HEALTH
National Institute on Minority Health and Health Disparities

Detail of Positions¹

GRADE	FY 2015 Actual	FY 2016 Enacted	FY 2017 President's Budget
Total, ES Positions	0	0	0
Total, ES Salary	0	0	0
GM/GS-15	8	9	9
GM/GS-14	13	14	14
GM/GS-13	15	15	15
GS-12	5	5	5
GS-11	4	4	4
GS-10	0	0	0
GS-9	3	3	3
GS-8	3	3	3
GS-7	3	3	3
GS-6	0	0	0
GS-5	0	0	0
GS-4	0	0	0
GS-3	0	0	0
GS-2	0	0	0
GS-1	0	0	0
Subtotal	54	56	56
Grades established by Act of July 1, 1944 (42 U.S.C. 207)	0	0	0
Assistant Surgeon General	0	0	0
Director Grade	2	2	2
Senior Grade	0	0	0
Full Grade	0	0	0
Senior Assistant Grade	1	1	1
Assistant Grade	0	0	0
Subtotal	3	3	3
Ungraded	16	16	16
Total permanent positions	57	59	59
Total positions, end of year	73	75	75
Total full-time equivalent (FTE) employment, end of year	63	64	64
Average ES salary	0	0	0
Average GM/GS grade	12.8	13.4	13.4
Average GM/GS salary	98,796	100,377	101,140

¹ Includes FTEs whose payroll obligations are supported by the NIH Common Fund.