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NIH Funding: FY1994-FY2019

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Contents

NIH Funding: FY1994-FY2019 1

Figures

Figure 1. National Institutes of Health (NIH) Funding, FY1994-FY2019..... 4

Tables

Table 1. NIH Funding, FY1994-FY2019 5

Contacts

Author Information..... 6

NIH Funding: FY1994-FY2019

The National Institutes of Health (NIH) is the primary federal agency charged with conducting and supporting biomedical and behavioral research. It is the largest of the eight health-related agencies that make up the Public Health Service (PHS) within the Department of Health and Human Services (HHS).¹ NIH's organization consists of the Office of the Director (OD) and 27 Institutes and Centers. The OD sets overall policy for NIH and coordinates the programs and activities of all NIH components, particularly in areas of research that involve multiple institutes.

NIH activities cover a wide range of basic, clinical, and translational research, focused on particular diseases, areas of human health and development, or more fundamental aspects of biomedical research. Its mission also includes research training and health information collection and dissemination.² More than 80% of the NIH budget funds extramural research through grants, contracts, and other awards.³ This funding supports research performed by more than 300,000 individuals who work at over 2,500 hospitals, medical schools, universities, and other research institutions around the country.⁴ About 10% of the agency's budget supports intramural clinical and basic research conducted by nearly 6,000 NIH physicians and scientists, most of whom are located on the NIH campus in Bethesda, MD.⁵

Funding for NIH comes primarily from the annual Labor, HHS, and Education (LHHS) appropriations bill, with an additional amount for Superfund-related activities from the Interior/Environment appropriations bill. Those two bills provide NIH's discretionary budget authority.⁶ In addition, NIH receives mandatory funding of \$150 million annually that is provided in the PHS Act for a special program on type 1 diabetes research and funding transferred to NIH pursuant to the "PHS Evaluation Tap" Transfer authority. The total funding available for NIH activities, taking account of add-ons and PHS tap transfers, is known as the NIH program level.⁷

Table 1 outlines NIH program level funding over the past 25 years, and **Figure 1** illustrates funding trends in both current (also called nominal dollars) and projected constant (i.e., inflation-adjusted) 2019 dollars. Between FY1994 and FY1998, funding for NIH grew from \$11.0 billion to \$13.7 billion in nominal terms. Over the next five years, Congress and the President doubled the NIH budget to \$27.2 billion in FY2003. In each of these years, NIH received annual funding increases of 14% to 16%. Since FY2003, NIH funding has increased more gradually in nominal dollars. Funding peaked in FY2010 before declining in FY2011 through FY2013, with increases

¹ The Public Health Service also includes the Centers for Disease Control and Prevention (CDC), the Food and Drug Administration (FDA), the Agency for Healthcare Research and Quality (AHRQ), the Health Resources and Services Administration (HRSA), the Substance Abuse and Mental Health Services Administration (SAMHSA), the Indian Health Service (IHS), and the Agency for Toxic Substances and Disease Registry (ATSDR).

² For further information on NIH, see CRS Report R41705, *The National Institutes of Health (NIH): Background and Congressional Issues*.

³ Department of Health and Human Services, *Fiscal Year 2018 Budget in Brief*, Washington, DC, May 2017, p. 38. Updated numbers were not available in the FY2019 HHS Budget in Brief.

⁴ Ibid.

⁵ Ibid.

⁶ NIH received a total of \$10.4 billion in supplemental, one-time FY2009 appropriations in the American Recovery and Reinvestment Act (ARRA) of 2009 (P.L. 111-5). ARRA funds were made available for obligation for two years; \$4.95 billion was obligated in FY2009, and \$5.45 billion in FY2010. CRS Report R43304, *Public Health Service Agencies: Overview and Funding (FY2010-FY2016)*.

⁷ Totals include amounts "transferred in" pursuant to PHS tap, but do not include any amounts "transferred out" under this same authority.

in subsequent years.⁸ In some years, funding for the agency decreased in nominal dollars. For instance

- the FY2006 total was 0.1% lower than the previous year, the first time that the NIH appropriation had decreased since FY1970;
- the FY2011 total, provided in the Full-Year Continuing Appropriations Act, 2011 (P.L. 112-10), was 1.0% below the previous fiscal year; and
- the FY2013 total, provided in the Consolidated and Further Continuing Appropriations Act, 2013 (P.L. 113-6), was reduced by the March 2013 sequestration and a transfer of funding under the authority of the HHS Secretary (\$1.553 billion and \$173 million, respectively), resulting in a budget that was 5.0% lower than the prior year.⁹

From FY2016 through FY2019, the NIH has seen funding increases of over 5% each year in nominal dollars. The FY2018 program level total represented an increase of \$3.0 billion (+8.7%) from FY2017, making this the largest single-year nominal dollar increase since FY2003 (excluding one-time funds provided by the American Recovery and Reinvestment Act of 2009 [ARRA, P.L. 111-5]).

For FY2019, the NIH has an estimated program level total of \$39.312 billion. The LHHS appropriations act (H.R. 6157, P.L. 115-245) provides the NIH with \$37.937 billion in discretionary LHHS budget authority, including amounts authorized by the 21st Century Cures Act (see text box below). Adding to this total, the amounts for the evaluation tap (\$1.147 billion), the mandatory type 1 diabetes program (\$150 million), and assuming a conservative estimate for Superfund related activities (\$78 million)¹⁰ bring the program-level total to an estimated \$39.312 billion.¹¹ This program level provides the NIH with \$2 billion (5.4%) more than the FY2018 program level and \$4.52 billion (13.0%) more than President Trump's FY2019 budget request for the NIH. This program level is \$748 million (1.9%) more than the House committee recommendation¹² but the same as the earlier Senate-passed program level recommendation.¹³

President Trump's FY2019 budget requested an NIH program level total of \$34.767 billion, a decrease of \$2.544 billion (-6.8%) compared with FY2018 enacted.¹⁴ Note that final FY2018 appropriations had not been enacted during the period in which the FY2019 President's request was being formulated. While the total request for NIH represented a decrease from FY2018-enacted levels, it represented an increase from FY2017-enacted levels and the FY2018 continuing resolution levels that were in place at the time FY2019 request levels were being determined.

According to the conference report accompanying P.L. 115-245 (H.Rept. 115-952, p. 529), each of the Institutes and Centers (IC) at the NIH will receive a funding increase in FY2019. Under the Trump FY2019 budget, all ICs except for Buildings and Facilities would have received a decrease compared to FY2018 enacted levels.

The 21st Century Cures Act and the NIH Innovation Account

The 21st Century Cures Act (P.L. 114-255) created the NIH Innovation account and specified that funds in the account must be appropriated in order to be available for expenditure. The Cures Act specified that the following amounts shall be transferred to the NIH Innovation account: \$352 million for FY2017; \$496 million for FY2018; \$711 million for FY2019; \$492 million for FY2020; \$404 million for FY2021; \$496 million for FY2022; \$1,085 million for FY2023; \$407 million for FY2024; \$127 million for FY2025; and, \$226 million for FY2026.¹⁵

¹⁵ The first round of funding was provided by Section 194 of the Further Continuing and Security Assistance

The Cures Act authorizes four projects in the following amounts: Precision Medicine Initiative (FY2017, \$40 million; FY2018, \$100 million; FY2019, \$186 million), the BRAIN Initiative (FY2017, \$10 million; FY2018, \$86 million; FY2019, \$115 million), cancer research (FY2017, \$300 million; FY2018, \$300 million; FY2019 \$400 million), and regenerative medicine using adult stem cells (FY2017, \$2 million; FY2018, \$10 million; FY2019, \$10 million). Amounts, once appropriated, are to be available until expended. The NIH Director may transfer these amounts from the NIH Innovation account to other NIH accounts but only for the purposes specified in the Cures Act. If the NIH Director determines that the funds for any of the four Innovation Projects are not necessary, the amounts may be transferred back to the NIH Innovation account. This transfer authority is in addition to other transfer authorities provided by law.

For further information, see CRS Report R44720, *The 21st Century Cures Act (Division A of P.L. 114-255)*.

The lower half of **Figure 1** portrays NIH funding adjusted for inflation (in projected constant 2019 dollars) using the Biomedical Research and Development Price Index (BRDPI).¹⁶ It shows that the purchasing power of NIH funding (non-ARRA) peaked in FY2003 (the last year of the five-year doubling period) and then fairly steadily declined for more than a decade (excluding ARRA) until back-to-back funding increases were provided in FY2016, FY2017, FY2018, and FY2019. In projected constant 2019 dollars, the estimated FY2019 program level for NIH is 9.0% less than the program level in FY2003.

Appropriations Act, 2017 (CR, P.L. 114-254). The CR appropriated \$352 million in the NIH Innovation account for necessary expenses to carry out the four NIH Innovation Projects as described in Section 1001(b)(4) of the Cures Act. The second round of funding was provided by the FY2018 omnibus (P.L. 115-141). The third round of funding is provided by the FY2019 Consolidated Defense, LHHS, and Continuing Resolution appropriations act (P.L. 115-245).

⁹ The FY2012 amount of \$30.861 billion appears to be 0.2% below the FY2011 amount of \$30.916 billion. However, the FY2011 amount includes \$297.3 million that was subject to transfer-out for the Global Fund to Fight AIDS, TB, and Malaria.

¹⁰ At the time of writing, full-year FY2019 appropriations had not been enacted for the Interior-Environment bill, which provides Superfund appropriations. Temporary appropriations for purposes funded under the bill have been provided through December 7 by a continuing resolution contained in Division C of P.L. 115-245. In the absence of final FY2019 Superfund appropriations, the lower Senate-recommended appropriations level of \$78 million was used to estimate the NIH program level.

¹¹ See table in H.Rept. 115-952, pp. 573-575 for all amounts except for the Superfund related activities estimate, which is from S.Rept. 115-276, p. 95.

¹² The House appropriations committee recommendations provide for an NIH program level total of \$38.564 billion, calculated from figures in H.Rept. 115-952, pp. 573-575, and using the House Superfund appropriations recommendation of \$80 million to NIEHS from H.Rept. 115-765, p. 82.

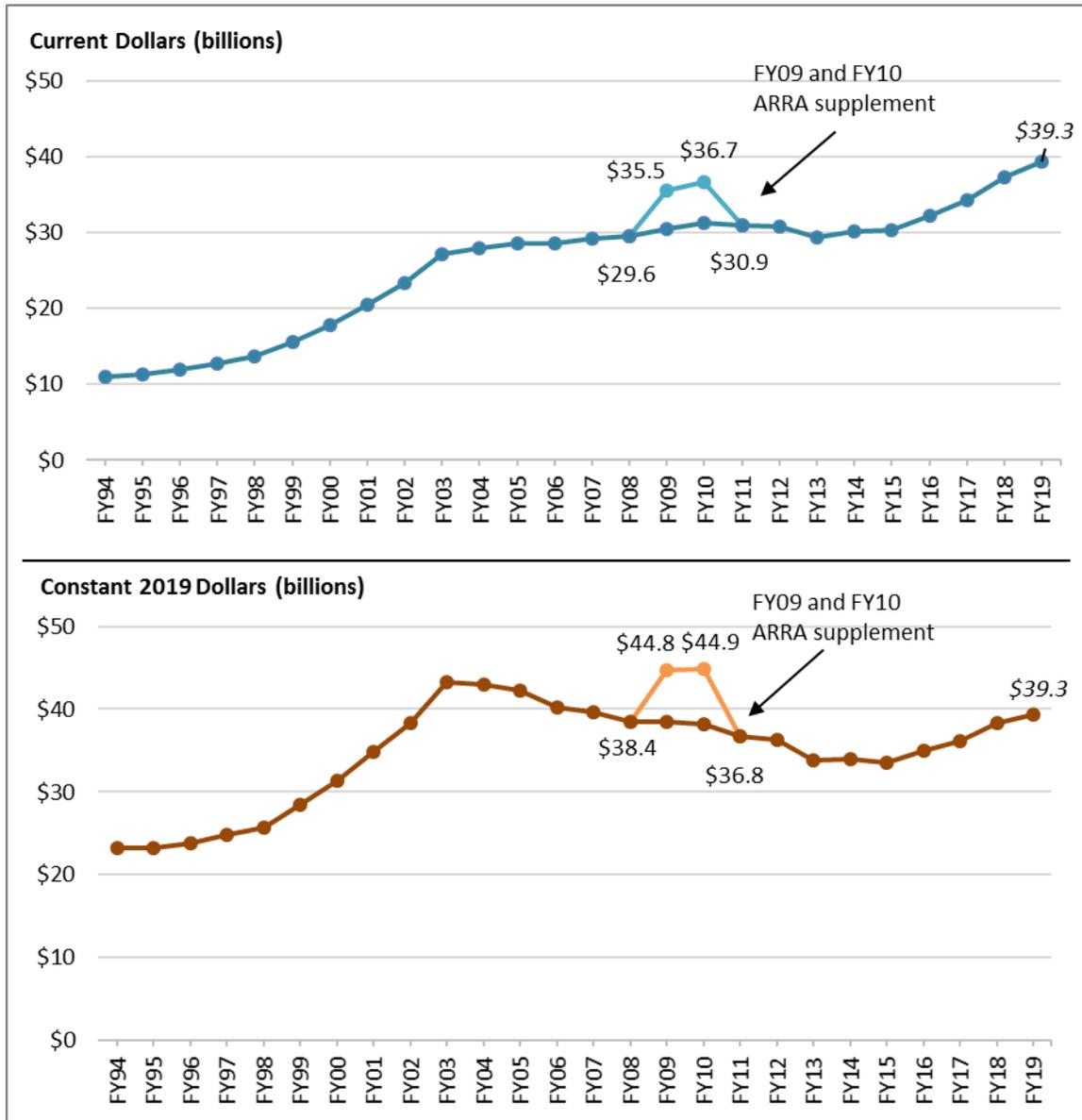
¹³ The Senate appropriations committee recommendations provide for an NIH program level total of \$39.312 billion, calculated from figures in H.Rept. 115-952, pp. 573-575, and using the Senate Superfund appropriations recommendation of \$78 million to NIEHS from S.Rept. 115-276, p. 95.

¹⁴ The FY2019 request level does not reflect the proposal to allocate an additional \$750 million to NIH for opioid-related activities from the \$10 billion in requested HHS-wide funding. The FY2019 request level is as shown in HHS, *Fiscal Year 2019 Budget in Brief*, Washington, DC, February 2018, p. 40, <https://www.hhs.gov/sites/default/files/fy-2019-budget-in-brief.pdf>.

¹⁵ The first round of funding was provided by Section 194 of the Further Continuing and Security Assistance Appropriations Act, 2017 (CR, P.L. 114-254). The CR appropriated \$352 million in the NIH Innovation account for necessary expenses to carry out the four NIH Innovation Projects as described in Section 1001(b)(4) of the Cures Act. The second round of funding was provided by the FY2018 omnibus (P.L. 115-141). The third round of funding is provided by the FY2019 Consolidated Defense, LHHS, and Continuing Resolution appropriations act (P.L. 115-245).

¹⁶ The index is developed for NIH by the Bureau of Economic Analysis of the Department of Commerce. It reflects the increase in prices of the resources needed to conduct biomedical research, including personnel services, supplies, and equipment. It indicates how much the NIH budget must change to maintain purchasing power. See "NIH Price Indexes," at <https://officeofbudget.od.nih.gov/gbiPriceIndexes.html>.

Figure I. National Institutes of Health (NIH) Funding, FY1994-FY2019.
 Program Level Funding in Current and Projected Constant (2019) Dollars.



Sources: NIH Budget Office, Appropriations History by Institute/Center (1938 to Present), at http://officeofbudget.od.nih.gov/approp_hist.html. FY2019 estimated program level is based on CRS analysis using figures from H.Rept. 115-952, pp. 573-575, and the Superfund recommendation from S.Rept. 115-276, p. 95. At the time of writing, full-year FY2019 appropriations had not been enacted for the Interior-Environment bill, which provides Superfund appropriations. Temporary appropriations for purposes funded under the bill have been provided through December 7 by a continuing resolution contained in Division C of P.L. 115-245. In the absence of final FY2019 Superfund appropriations, the lower Senate-recommended appropriations level of \$78 million was used to estimate the NIH program level. Inflation adjustment reflects the Biomedical Research and Development Price Index (BRDPI), updated January 2018, <https://officeofbudget.od.nih.gov/gbiPricelIndexes.html>.

Notes: By convention, program level totals include amounts “transferred in” pursuant to PHS tap, but do not include any amounts “transferred out” under this same authority. Program level includes all budget authority, including appropriations for the Global Fund to Fight AIDS, TB, and Malaria (FY2002-FY2011) that were subject to transfer-out. As of FY2012, NIH no longer receives appropriations for the National Institute of Allergy and Infectious Diseases (NIAID) identifying resources for the Global Fund; this responsibility was transferred to

another federal agency. ARRA supplementary funding is from the American Recovery and Reinvestment Act of 2009, P.L. 111-5. In general, amounts provided to NIH for emergency requirements are excluded from these totals (e.g., FY2015 amount does not include \$238 million for the NIAID for research on Ebola that was provided in P.L. 113-235, Title VI of Division G).

Table I. NIH Funding, FY1994-FY2019

Program Level Funding in Current and Constant (2019) Dollars (billions)

Fiscal Year	Program Level Current \$	% Change	Program Level Projected Constant 2019 \$	% Below 2003
1994	\$10.956		23.228	
1995	11.300	3.1%	23.155	
1996	11.928	5.6%	23.832	
1997	12.741	6.8%	24.768	
1998	13.675	7.3%	25.712	
1999	15.629	14.3%	28.485	
2000	17.841	14.1%	31.347	
2001	20.459	14.7%	34.791	
2002	23.321	14.0%	38.387	
2003	27.167	16.5%	43.198	
2004	28.037	3.2%	42.980	-0.5%
2005	28.594	2.0%	42.194	-2.3%
2006	28.560	-0.1%	40.279	-6.8%
2007	29.179	2.2%	39.647	-8.2%
2008	29.607	1.5%	38.430	-11.0%
2009	30.545	3.2%	38.520	-10.8%
2010	31.238	2.3%	38.231	-11.5%
2011	30.916	-1.0%	36.785	-14.8%
2012	30.861	-0.2%	36.255	-16.1%
2013	29.316	-5.0%	33.806	-21.7%
2014	30.143	2.8%	34.029	-21.2%
2015	30.311	0.6%	33.536	-22.4%
2016	32.311	6.6%	34.989	-19.0%
2017	34.301	6.2%	36.202	-16.2%
2018	37.311	8.7%	38.349	-11.2%
2019 est.	39.312	5.4%	39.312	-9.0%
NIH Funding Including ARRA Supplement				
2009	35.499		44.773	
2010	36.684		44.902	

Source: NIH Budget Office, Appropriations History by Institute/Center (1938 to Present), at http://officeofbudget.od.nih.gov/approp_hist.html. FY2019 estimated program level is based on CRS analysis using

figures from H.Rept. 115-952, pp. 573-575, and the Superfund recommendation from S.Rept. 115-276, p. 95. At the time of writing, full-year FY2019 appropriations had not been enacted for the Interior-Environment bill, which provides Superfund appropriations. Temporary appropriations for purposes funded under the bill have been provided through December 7 by a continuing resolution contained in Division C of P.L. 115-245. In the absence of final FY2019 Superfund appropriations, the lower Senate-recommended appropriations level of \$78 million was used to estimate the NIH program level. Inflation adjustment reflects the Biomedical Research and Development Price Index (BRDPI), updated January 2018, <https://officeofbudget.od.nih.gov/gbiPriceIndexes.html>.

Notes: By convention, budget tables, such as **Table 1**, include amounts “transferred in” pursuant to PHS tap, but do not include any amounts “transferred out” under this same authority. Program level includes all budget authority, including appropriations for the Global Fund to Fight AIDS, TB, and Malaria (FY2002-FY2011) that were subject to transfer-out. As of FY2012, NIH no longer receives appropriations for the National Institute of Allergy and Infectious Diseases (NIAID) identifying resources for the Global Fund; this responsibility was transferred to another federal agency. ARRA supplementary funding is from the American Recovery and Reinvestment Act of 2009, P.L. 111-5. In general, amounts provided to NIH for emergency requirements are excluded from these totals (e.g., FY2015 amount does not include \$238,000,000 for the NIAID for research on Ebola that was provided in P.L. 113-235, Title VI of Division G.).

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