

Trans-NIH Research
Conducted in Fiscal Years 2017 and 2018

Report to the Director, National Institutes of Health

October 2019

I. Introduction

As amended by the 21st Century Cures Act (Public Law 114-255), section 402A(c)(2)(B) of the Public Health Service Act (42 U.S.C. 282a(c)(2)(B)) requires that not later than two years after the enactment of the 21st Century Cures Act, the head of each national research institute or national center submit to the NIH Director a report, to be included in the NIH Triennial Report, on the amount made available by the institute or center (IC) with respect to each applicable fiscal year for conducting or supporting research that involves collaboration between the IC and one or more other ICs.

This report – specifically, Tables 1 and 2 – provides the amounts made available by each IC in fiscal years (FY) 2017 and 2018 for conducting or supporting research that involved collaboration between that IC and one or more other ICs.

II. Overview of Collaborations within the NIH

The NIH is composed of 27 ICs, each having a distinct mission. Leaders across the NIH recognize that scientific progress often comes at the interface of traditional boundaries. Therefore, there is considerable trans-NIH collaborative activity across IC boundaries at every level of NIH operations. Trans-NIH collaborative activities can be found in all disease areas and across basic, translational, and clinical research. These collaborations can be formal or informal and can involve sharing materials, specimens, or scientific expertise. Collaborations take place at any or all stages of a research project or program, including:

- development of a concept, initiative, or plan;
- funding;
- conduct of the research in intramural laboratories;
- management and administration of the project; and
- assessment of results.

Trans-NIH research collaborations represent unique opportunities to build on the scientific expertise, sophisticated technologies, infrastructure, and knowledge base of individual ICs and to apply this wealth of information to addressing a wide range of diseases and health conditions. These collaborations provide multi-disciplinary and multi-faceted approaches to critical scientific questions and lead to special initiatives and innovative programs for the discovery, development, and testing of strategies to diagnose, prevent, and treat a wide range of health conditions. Inter-IC collaborations also permit the leveraging of crucial resources to ensure precious research dollars are used effectively and efficiently in improving the public health of all Americans.

III. Scope of the Report

This report pertains to the collaborative research activities conducted or supported by 24 of the 27 ICs. For reasons discussed below, the Clinical Center, the Center for Information Technology, and the Center for Scientific Review are not part of this report.

Inclusions:

For the purposes of this report, a trans-NIH research collaboration is defined as a formally documented, science-based effort that includes two or more ICs. Within this defined cohort, two types of extramural collaborations are included in the budget figures presented in this report: 1) grants and contracts that are co-funded by two or more ICs, and 2) grants and contracts funded in response to collaborative Funding Opportunity Announcements (FOAs) developed and announced by two or more ICs. FOAs of this type include Requests for Applications, Requests for Proposals, and Program Announcements. A qualifying feature of these extramural collaborative FOAs is the formal participation by multiple ICs at the outset of developing and issuing the FOA.

The NIH Intramural Research Program is also highly collaborative. In addition to collaborating on research, ICs' intramural programs jointly fund specific shared resources (e.g., imaging technologies and instrumentation) to minimize duplicative equipment and to conserve costs. Eligible intramural collaborative research projects are included in this report.

Exclusions:

“Parent Announcements” are excluded as collaborative FOAs. These FOAs are general announcements of guidelines for grant mechanisms (e.g., research project, or R01, grants) and do not address scientific areas. Therefore, they are outside the scope of the collaborative FOAs included in this report. However, ICs that provide shared resources for grants funded under Parent Announcements (i.e., they are co-funded) are included in this report.

This report also excludes collaborative activities initiated and/or led through or funded by entities within the Office of the Director (OD), such as the Division of Program Coordination, Planning, and Strategic Initiatives (DPCPSI). This is consistent with this report's definition of a trans-NIH collaboration and with NIH's interpretation of the legislative language.

The amounts of collaborative activities presented in Tables 1 and 2 exclude collaborative efforts coordinated through the NIH Clinical Center because the Clinical Center's budget is funded through contributions from the ICs' intramural budgets. However, it is important to note that the Clinical Center coordinates a broad range of trans-NIH activities. As the world's largest hospital devoted to clinical research, its specialized design places patient care units in close proximity to research laboratories. This model facilitates interaction and collaboration among clinical researchers and supports the rapid translation of scientific observations and laboratory discoveries into new approaches for diagnosing, treating, and preventing disease.

The collaboration-related budget figures also exclude the following: 1) collaborative efforts coordinated through the Center for Information Technology, which provides the NIH community with a variety of information technology services to support mission-critical research and administration; 2) non-research collaborations that support trans-NIH research initiatives, such as the development and maintenance of biomedical data and information services provided by the National Library of Medicine; 3) the Center for Scientific Review, which has a wholly collaborative mission as the portal for NIH grant applications and their review for scientific merit; 4) collaborations conducted or supported by individual ICs and other agencies within HHS (these types of activities are included in the Report on NIH Collaborations with Other HHS Agencies, available at <https://report.nih.gov/crs/>); 5) collaborations between individual ICs and private sector partners; 6) certain awards made using reimbursable dollars; and 7) the Special Statutory Funding Program for Type 1 Diabetes Research and the Superfund Program, which are collaborative efforts by design but not included in the amounts of collaborative activities shown in Tables 1 and 2.

IV. Percentage of Funds Made Available in Fiscal Years 2017 and 2018 by Each National Research Institute or Center for Conducting Trans-NIH Research

Table 1 presents the percentage of FY 2017 funds made available by each research IC for conducting trans-NIH research. Table 2 presents the corresponding information for FY 2018. The IC amounts presented in these tables represent the sum of collaborative activities in three areas: extramural grants, extramural contracts, and intramural research projects. As with extramural projects, reporting on intramural projects is limited to formal collaborations between two or more ICs. In each case, the total annual budget for a collaborative intramural research project is credited wholly to the lead IC because the NIH Intramural Database does not partition effort or budget by individual ICs.

V. Conclusion

Trans-NIH collaborations provide crucial support for projects and programs in a wide range of scientific disciplines of biomedical, behavioral, and social science research; clinical trials evaluating strategies to prevent and treat diseases; observational cohort studies involving individuals with infectious or chronic diseases; and training programs designed to mentor the next cadre of basic and clinical biomedical researchers. Tables 1 and 2 illustrate that a substantial percentage of the ICs' budgets supports collaborative research activities. However, as several categories of collaboration are excluded from this report, the budget figures presented in Tables 1 and 2 represent significant underestimates of the overall level of trans-NIH collaborations.

Table 1: IC Collaborative Activity Financial Summary – FY 2017

Dollars in Thousands

Funding IC	Total IC Actual Obligations*	Total Collaborative Activities**	Percent for Collaborative Activities
FIC	\$ 71,813	\$ 46,351	64.5%
NCATS	\$ 704,248	\$ 78,224	11.1%
NCCIH	\$ 134,373	\$ 38,683	28.8%
NCI	\$ 5,636,393	\$ 720,532	12.8%
NEI	\$ 731,203	\$ 83,863	11.5%
NHGRI	\$ 528,316	\$ 247,534	46.9%
NHLBI	\$ 3,209,843	\$ 376,199	11.7%
NIA	\$ 2,048,792	\$ 315,720	15.4%
NIAAA	\$ 482,449	\$ 93,149	19.3%
NIAID	\$ 4,949,275	\$ 901,425	18.2%
NIAMS	\$ 556,568	\$ 86,135	15.5%
NIBIB	\$ 356,971	\$ 96,113	26.9%
NICHD	\$ 1,376,541	\$ 310,973	22.6%
NIDA	\$ 1,070,813	\$ 206,356	19.3%
NIDCD	\$ 435,877	\$ 47,474	10.9%
NIDCR	\$ 424,782	\$ 64,550	15.2%
NIDDK	\$ 2,009,448	\$ 297,821	14.8%
NIEHS	\$ 789,859	\$ 102,590	13.0%
NIGMS	\$ 2,646,069	\$ 185,240	7.0%
NIMH	\$ 1,604,624	\$ 413,570	25.8%
NIMHD	\$ 287,640	\$ 62,914	21.9%
NINDS	\$ 1,778,684	\$ 391,594	22.0%
NINR	\$ 149,930	\$ 33,385	22.3%
NLM***	\$ 404,250	\$ 17,831	4.4%
TOTAL****	\$ 32,311,424	\$ 5,218,225	16.1%

*For more information on “Total IC Actual Obligations,” see [https://officeofbudget.od.nih.gov/pdfs/FY20/Actual%20Obligations%20By%20IC%20FY%202000%20-%20FY%202018%20\(V\).pdf](https://officeofbudget.od.nih.gov/pdfs/FY20/Actual%20Obligations%20By%20IC%20FY%202000%20-%20FY%202018%20(V).pdf).

**Data were extracted from the NIH’s Electronic Research Administration (eRA) Manual Categorization System, after extramural research grants and contracts data and intramural research project data had been finalized by ICs.

***The majority of NLM’s annual budget supports a range of biomedical information services that fall outside the definition of trans-NIH research collaboration used in this report.

****Numbers may not add up due to rounding. Sum of “Total IC Actual Obligations” does not represent total NIH obligations.

An acronym list of NIH ICs can be found at http://grants.nih.gov/grants/acronym_list.htm.

Table 2: IC Collaborative Activity Financial Summary – FY 2018

Dollars in Thousands

Funding IC	Total IC Actual Obligations*	Total Collaborative Activities**	Percent for Collaborative Activities
FIC	\$ 75,534	\$ 50,802	67.3%
NCATS	\$ 754,080	\$ 89,446	11.9%
NCCIH	\$ 141,667	\$ 38,002	26.8%
NCI	\$ 5,948,569	\$ 966,150	16.2%
NEI	\$ 770,483	\$ 95,506	12.4%
NHGRI	\$ 556,741	\$ 207,649	37.3%
NHLBI	\$ 3,374,154	\$ 349,793	10.4%
NIA	\$ 2,571,438	\$ 424,831	16.5%
NIAAA	\$ 508,398	\$ 102,863	20.2%
NIAID	\$ 5,262,398	\$ 991,213	18.8%
NIAMS	\$ 585,240	\$ 81,786	14.0%
NIBIB	\$ 376,700	\$ 108,101	28.7%
NICHD	\$ 1,449,613	\$ 326,047	22.5%
NIDA	\$ 1,161,149	\$ 223,982	19.3%
NIDCD	\$ 458,876	\$ 55,343	12.1%
NIDCR	\$ 446,656	\$ 73,292	16.4%
NIDDK	\$ 1,989,700	\$ 239,869	12.1%
NIEHS	\$ 826,646	\$ 105,948	12.8%
NIGMS	\$ 2,780,954	\$ 153,899	5.5%
NIMH	\$ 1,754,423	\$ 471,063	26.9%
NIMHD	\$ 304,372	\$ 87,974	28.9%
NINDS	\$ 1,949,067	\$ 468,752	24.1%
NINR	\$ 157,633	\$ 37,711	23.9%
NLM***	\$ 424,789	\$ 23,277	5.5%
TOTAL****	\$ 34,629,280	\$ 5,773,299	16.7%

*For more information on “Total IC Actual Obligations,” see [https://officeofbudget.od.nih.gov/pdfs/FY20/Actual%20Obligations%20By%20IC%20FY%202000%20-%20FY%202018%20\(V\).pdf](https://officeofbudget.od.nih.gov/pdfs/FY20/Actual%20Obligations%20By%20IC%20FY%202000%20-%20FY%202018%20(V).pdf).

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