



# Bureaucracy at NIH Fritters Away Research Funds

KAILASH GUPTA

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**CORRESPONDENCE:**

[aidsrestherapy@gmail.com](mailto:aidsrestherapy@gmail.com)

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The United States would not be the world leader in science today if science and technological innovations were not supported. An average US citizen may not grasp the real value of scientific discovery and invention in the growth and prosperity of the USA, but one expects that the US Congress would certainly know it. However, a look at the past decade's stagnant congressional appropriations for NIH to promote health science and technology shows that the US leaders are ignoring the value of science. Many articles written in recent years by scientists and educators imploring our leaders to increase funding for science attest to the growing concern that our resources and momentum to conduct science is declining.

This article is not written to bring the same point home, but instead to address inefficiency in research management and distribution of funds by NIH. After having worked several years in academia (as a tenured professor), at intramural NIH (as a sabbatical scientist) and at extramural NIH (as a program officer), I have observed that science funds have not been managed efficiently. The doubling of NIH budget from 1998 to 2003 was greatly welcomed but at the same time it increased bureaucracy to a level that the scientific enterprise has become a bureaucratic behemoth. Unfortunately and paradoxically for science, increased funding caused bureaucracy to bloat disproportionately.

In particular, the extramural NIH has become very inefficient. The extramural NIH conducts the review of research projects, monitor the progress of grantees, and facilitate the distribution of NIH funds to the biomedical scientists. A typical extramural scientist (Program Officer) at NIH will have an oversight on a portfolio of grants, contracts and/or program projects, or have an oversight on clinical trials. In addition one may go to attend scientific meetings, listen-on in grant review meetings, and write special research projects for funding. While a PO will attend a review meeting, he/she would not be able to express any opinion on the deliberation of a research proposal. Similarly, the PO monitors the investigators' research progress while having no say in their research. Hardly anyone cares for the "annual progress report" (APR) the grantees are required to send to NIH. The APR is unnecessary, when stringent peer review system does a much better evaluation? These bureaucratic activities, which do not contribute anything to science, take away the critical research funds.

To keep POs busy, they are asked to develop program initiatives, program projects, and contracts indicating that POs know more about the leading edge of science than those working in the actual laboratory settings. Many program initiatives take funds away from the mainstream science, and direct funding according to the wishes of the higher-ups and program personnel. Progress and promotion of program personnel depend on writing initiatives rather than on helping struggling scientists procure research funds. Similarly having multiple trainings and surveys are useless for program personnel but a great benefit to contractors.

Paradoxically NIH keeps developing programs purporting to help early stage investigators, although

the same can be achieved by not putting money in special projects. Both senior and early stage investigators will be immensely helped by a better pay-line for unsolicited research proposals. The best science is generated by independent thinkers and researchers, not by asking scientists to work on program and projects generated by program personnel.

As a Program Officer (PO), I noticed that the current strength of scientific personnel at the extramural NIH is more than twice. The funds freed from the non-productive bureaucratic activities can be more productively channeled for hiring scientists to do research at academic and research institutions offsetting the jobs lost at extramural NIH. This would be a greatly welcome situation for research scientists and would greatly enhance research capability and productivity. This would be a win-win scenario for science and scientists alike.

Often NIH institutes compete with each other to fund certain area of research creating duplication of funds in that area while depleting the funds for the basic research. Further it creates an environment where personal biases develop to fund someone. Whenever, a new program is developed, most often majority of its funds go to same PIs who already have funds for doing similar research. Why not let the innovative science mature before more funds are committed to that research? For example when “nanotechnology” appeared on the horizon, all NIH institutes wanted to develop programs to fund that area of research rather than putting a joint NIH-wide program so that the funds would not be duplicated. NIH directed programs and projects ignore the fact the breakthrough in science and medicine comes from independent research scientists.

To complicate the management of grants, many program personnel have never worked as faculty members in academic situations and have not written any grant proposal. But they are put in positions to decide the fate of scientists. Of lately, due to easy access or networking many POs are being recruited from intramural NIH with little scrutiny. The selection is not as rigorous as a faculty member's, and often selection occurs based on personal likings rather than academic credentials. Because of personal connections many of them get rapidly promoted to GS15 level and some to senior positions with salaries more than \$200K per year, equivalent to a senior tenured professor at any prestigious institution. Thus, extramural NIH has to be more transparent and selective when it comes to hiring.

It is puzzling as to why the extramural NIH has a separate Center for Scientific Review (CSR) for grant proposal reviews. While NSF and other federal agency program persons are allowed to review, manage and negotiate grant funds, most NIH program persons have no authority whatsoever on negotiating grant expenses. There are some lessons for NIH to learn from other federal and private organizations when it comes to managing federal research funding.

NIH is expected to have separate pots of funds for the intramural and the extramural. However, the director of each institute controls both the fund categories. It is more than likely that when the budget is tight, an institute director would find the ways and means to shift extramural funds to intramural research and/or to his own research. This can be discerned from the “*History of Obligations by Total Mechanism from fiscal years 2006-2015*” as provided in the *NIH Data Book*. During 2006-2015, the intramural budget went from \$2.7B to \$3.4B (an increase by 25%) and the *Research Management and Support (RMS)* budget went from \$1.1B to \$1.5B (an increase by 36%). While during same time-frame research projects support for independent research went from \$15B to \$16B, a barely 6% increase! It will be helpful to have the extramural component as an independent entity with no interference from the conflicted director of an institute.

The current budget of NIH is about \$30 billions, of that approximately 11% goes to carry out research at the intramural NIH institutes and about 5% goes to run the Research Management and Support (RMS) that primarily includes extramural activities (Figures 1 and 2, Table 1). If 50% of the extramural funds were transferred to research grants budget, it could generate 1600 new grants (average grant cost ~475 K). It would employ more active scientists by the same amount of funds than are currently employed in bureaucracy at extramural NIH.

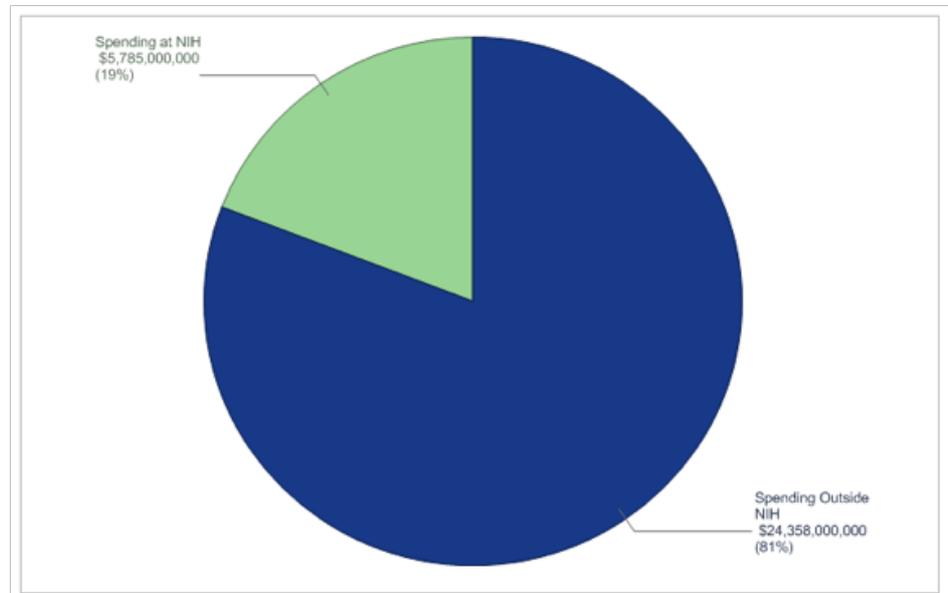
For the sake of oversight and accountability, each NIH institute has its own advisory council made of the scientists from the academic world. Since institute directors or other higher-ups appoint these members, many of them do not want to challenge any NIH administrator for the fear of jeopardizing their own funding situation.

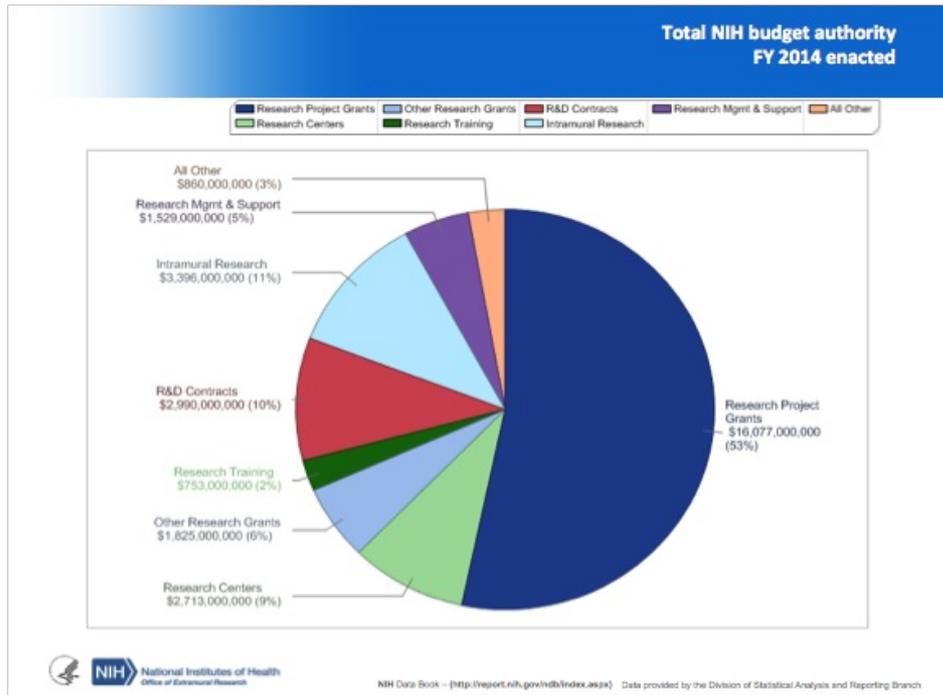
Apparently, the NIH extramural bureaucracy has mushroomed like building an empire. To have more personnel working for any higher-up is a matter of pride, power, and prestige. Do we really need empires and those many program personnel, review officers, and other administrative managers doing the work that is unnecessary and unproductive? It is well known that any organization that becomes too big becomes inefficient.

The Congressional stipulation that the appropriation of one year has to be spent in the same year does not help in bringing efficiency. No wonder, just before the end of the fiscal year, NIH goes on a buying spree. For unimpeded progress of science, NIH must have a multi-year funding rather than one-year appropriation.

While extramural NIH should be run as a scientific enterprise, it has been relegated to a bureaucratic setup. To make it more efficient, it essentially needs an overhaul. It needs to significantly reduce and simplify the bureaucracy. There are several ways NIH can improve on research funding as indicated above. Even small steps can go a long way in helping research scientists get funds. Let us hope our scientific and political leaders have courage to take steps that makes our science more productive.

Reference: <http://report.nih.gov/nihdatabook/>





**NATIONAL INSTITUTES OF HEALTH  
History Of Obligations By Total Mechanism \***  
Fiscal Years 2006 - 2015  
(Dollars in Thousands)

Budget Mechanism	FY 2006 Actual Obligations	FY 2007 Actual Obligations	FY 2008 Actual Obligations	FY 2009 Actual Obligations	FY 2010 Actual Obligations	FY 2011 Actual Obligations	FY 2012 Actual Obligations	FY 2013 Actual Obligations	FY 2013 Comparable Actual Obligations <sup>2</sup>	FY 2014 Enacted <sup>3</sup>	FY 2015 President's Budget
Res. Project Grants	\$15,265,348	\$15,333,540	\$15,688,339	\$16,124,554	\$16,501,300	\$16,428,047	\$16,550,486	\$15,445,463	\$15,445,463	\$16,077,332	\$16,196,847
Research Centers	2,659,653	2,709,259	2,946,346	3,018,710	3,082,914	3,009,480	3,040,375	\$2,708,744	2,708,745	2,713,655	2,722,834
Other Research	1,624,898	1,652,501	1,779,990	1,775,387	1,794,148	1,802,937	1,808,138	\$1,783,481	1,783,484	1,824,798	1,867,979
<b>Subtotal, Res. Grants</b>	<b>\$19,549,899</b>	<b>\$19,695,300</b>	<b>\$20,414,675</b>	<b>\$20,918,651</b>	<b>\$21,378,362</b>	<b>\$21,240,464</b>	<b>\$21,398,999</b>	<b>\$19,937,688</b>	<b>\$19,937,691</b>	<b>\$20,615,185</b>	<b>\$20,787,660</b>
Research Training	731,121	763,797	770,480	776,193	775,186	771,766	761,934	\$733,524	733,524	752,877	767,132
R & D Contracts	2,581,106	2,693,443	2,934,858	3,069,412	3,143,929	2,996,640	2,937,188	\$2,927,077	2,895,302	2,990,346	3,030,346
Intramural Research	2,742,466	3,002,558	3,091,240	3,222,852	3,306,312	3,330,815	3,401,506	\$3,247,193	3,282,734	3,395,910	3,435,324
Res. Mgt. & Support	1,098,953	1,136,197	1,372,225	1,428,138	1,509,287	1,517,630	1,530,874	\$1,485,575	1,485,463	1,528,653	1,544,027
Cancer Control <sup>4</sup>	505,705	498,396	N/A	N/A	N/A						
Construction	29,700	14,100	0	0	0	0	0	\$0	0	0	0
Library of Medicine <sup>5</sup>	311,721	7,376	N/A	N/A	N/A						
Office of the Director	724,831	1,046,557	523,798	616,639	632,966	623,887	609,530	\$608,584	607,663	572,519	574,552
<b>Subtotal</b>	<b>\$28,275,502</b>	<b>\$28,857,724</b>	<b>\$29,107,274</b>	<b>\$30,031,885</b>	<b>\$30,746,042</b>	<b>\$30,481,202</b>	<b>\$30,640,031</b>	<b>\$28,939,641</b>	<b>\$28,942,378</b>	<b>\$29,855,490</b>	<b>\$30,139,441</b>
Buildings & Facilities <sup>6</sup>	178,376	97,034	135,147	96,735	210,975	70,081	133,228	\$114,580	126,013	136,341	136,663
Interim - Superfund	79,101	79,111	77,531	78,070	79,201	79,045	78,923	\$74,864	74,871	77,349	77,349
<b>Total, NIH Budget Authority</b>	<b>\$28,532,979</b>	<b>\$29,033,869</b>	<b>\$29,319,954</b>	<b>\$30,206,690</b>	<b>\$31,036,218</b>	<b>\$30,630,328</b>	<b>\$30,852,187</b>	<b>\$29,129,085</b>	<b>\$29,143,262</b>	<b>\$30,142,653</b>	<b>\$30,353,453</b>

<sup>1</sup>Obligations for actual years exclude lapse and include Type I Diabetes.  
<sup>2</sup>NIH has modified its traditional budget display by mechanism so that activities of the National Cancer Institute's Cancer Prevention and Control Program and the National Library of Medicine are allocated among the various cross-NIH mechanisms of support.  
<sup>3</sup>R&P mechanism amounts include the R&P appropriation plus dollars associated with repair and improvement (R&I)-related construction for the Frederick MD facility appropriated to NCI.  
<sup>4</sup>FY 2013 Comparable column includes all transfers and comparable adjustments. The amounts in the FY 2014 column take into account funding reallocations, and therefore may not add to the total budget authority reflected herein.