



JUN 26 2007

**TO:** Elias A. Zerhouni, M.D.  
Director  
National Institutes of Health

**FROM:** Daniel R. Levinson *Daniel R. Levinson*  
Inspector General

**SUBJECT:** Review of Graduate Student Compensation Costs Charged to National Institutes of Health Research Grants (A-05-06-00046)

The attached final report provides the results of our review of graduate student compensation costs charged to National Institutes of Health (NIH) research grants. We conducted this review at the request of two Members of Congress.

Our objectives were to:

- determine whether universities and colleges limited the graduate student compensation charged to NIH research grants to the amount paid to a first-year, postdoctoral scientist performing comparable work at the same institution and to the National Research Service Award stipend in effect when NIH awarded the grants and
- provide statistical estimates of the number of grants with graduate student compensation costs charged; the number of researchers who received graduate student compensation, including tuition remission, from NIH grants; and the costs of such compensation.

To meet these objectives, we selected a statistical sample of 200 NIH research grants. We focused on the 97 grants that had charges for graduate student compensation.

For the 97 sampled NIH grants, universities and colleges limited graduate student compensation charges to the amount paid to a first-year, postdoctoral scientist performing comparable work at the same institution and to the National Research Service Award stipend in effect when NIH awarded the grants. The attached report provides our statistical estimates related to graduate student compensation costs charged to NIH grants.

The report contains no recommendations.

Should you have any questions or comments about this report, please do not hesitate to call me, or your staff may contact Joseph J. Green, Assistant Inspector General for Grants, Internal Activities, and Information Technology Audits, at (202) 619-1175 or through e-mail at [Joe.Green@oig.hhs.gov](mailto:Joe.Green@oig.hhs.gov). Please refer to report number A-05-06-00046.

Attachment

Department of Health and Human Services

**OFFICE OF  
INSPECTOR GENERAL**

**REVIEW OF GRADUATE STUDENT  
COMPENSATION COSTS  
CHARGED TO NATIONAL  
INSTITUTES OF HEALTH  
RESEARCH GRANTS**



Daniel R. Levinson  
Inspector General

June 2007  
A-05-06-00046

# ***Office of Inspector General***

<http://oig.hhs.gov>

The mission of the Office of Inspector General (OIG), as mandated by Public Law 95-452, as amended, is to protect the integrity of the Department of Health and Human Services (HHS) programs, as well as the health and welfare of beneficiaries served by those programs. This statutory mission is carried out through a nationwide network of audits, investigations, and inspections conducted by the following operating components:

## ***Office of Audit Services***

The Office of Audit Services (OAS) provides all auditing services for HHS, either by conducting audits with its own audit resources or by overseeing audit work done by others. Audits examine the performance of HHS programs and/or its grantees and contractors in carrying out their respective responsibilities and are intended to provide independent assessments of HHS programs and operations. These assessments help reduce waste, abuse, and mismanagement and promote economy and efficiency throughout HHS.

## ***Office of Evaluation and Inspections***

The Office of Evaluation and Inspections (OEI) conducts national evaluations to provide HHS, Congress, and the public with timely, useful, and reliable information on significant issues. Specifically, these evaluations focus on preventing fraud, waste, or abuse and promoting economy, efficiency, and effectiveness in departmental programs. To promote impact, the reports also present practical recommendations for improving program operations.

## ***Office of Investigations***

The Office of Investigations (OI) conducts criminal, civil, and administrative investigations of allegations of wrongdoing in HHS programs or to HHS beneficiaries and of unjust enrichment by providers. The investigative efforts of OI lead to criminal convictions, administrative sanctions, or civil monetary penalties.

## ***Office of Counsel to the Inspector General***

The Office of Counsel to the Inspector General (OCIG) provides general legal services to OIG, rendering advice and opinions on HHS programs and operations and providing all legal support in OIG's internal operations. OCIG imposes program exclusions and civil monetary penalties on health care providers and litigates those actions within HHS. OCIG also represents OIG in the global settlement of cases arising under the Civil False Claims Act, develops and monitors corporate integrity agreements, develops compliance program guidances, renders advisory opinions on OIG sanctions to the health care community, and issues fraud alerts and other industry guidance.

# *Notices*

---

**THIS REPORT IS AVAILABLE TO THE PUBLIC**  
at <http://oig.hhs.gov>

In accordance with the principles of the Freedom of Information Act (5 U.S.C. 552, as amended by Public Law 104-231), Office of Inspector General, Office of Audit Services reports are made available to members of the public to the extent the information is not subject to exemptions in the act. (See 45 CFR part 5.)

## **OAS FINDINGS AND OPINIONS**

The designation of financial or management practices as questionable or a recommendation for the disallowance of costs incurred or claimed, as well as other conclusions and recommendations in this report, represent the findings and opinions of the HHS/OIG/OAS. Authorized officials of the HHS divisions will make final determination on these matters.



## **EXECUTIVE SUMMARY**

### **BACKGROUND**

#### **Graduate Student Researcher Compensation**

The National Institutes of Health (NIH) awards grants to universities and colleges to fund health research projects. In charging costs to these grants, institutions must comply with Office of Management and Budget Circular A-21, "Cost Principles for Educational Institutions." The circular states that compensation for personal services covers all costs, including salaries, wages, and fringe benefits, paid currently or accrued by an institution for employee services rendered during the grant performance period. Tuition remission and other forms of compensation paid as, or in lieu of, wages to students performing necessary work are allowable if, among other things, the payments are reasonable and for the performance of necessary work.

After reviews by the Office of Inspector General and the Government Accountability Office identified unreasonable graduate student compensation charges, NIH issued NIH Notice NOT-OD-02-017. The notice, dated December 10, 2001, states that graduate student compensation is considered reasonable if the payments do not exceed the amount paid to a first-year, postdoctoral scientist performing comparable work at the same institution. The maximum compensation awarded to support a graduate student is tied to the zero-level National Research Service Award stipend in effect when NIH awarded the grant.

#### **Congressional Request**

We conducted this review at the request of two Members of Congress. To fulfill this request, we selected a statistical sample of 200 NIH grants. We focused on the 97 grants that had charges for graduate student compensation.

### **OBJECTIVES**

Our objectives were to:

- determine whether universities and colleges limited the graduate student compensation charged to NIH research grants to the amount paid to a first-year, postdoctoral scientist performing comparable work at the same institution and to the National Research Service Award stipend in effect when NIH awarded the grants and
- provide statistical estimates of the number of grants with graduate student compensation costs charged; the number of researchers who received graduate student compensation, including tuition remission, from NIH grants; and the costs of such compensation.

## **SUMMARY OF RESULTS**

For the 97 sampled NIH grants, universities and colleges limited graduate student compensation charges to the amount paid to a first-year, postdoctoral scientist performing comparable work at the same institution and to the National Research Service Award stipend in effect when NIH awarded the grants. The body of this report provides our statistical estimates related to graduate student compensation costs charged to NIH grants.

This report contains no recommendations.

## TABLE OF CONTENTS

	<u>Page</u>
<b>INTRODUCTION</b> .....	1
<b>BACKGROUND</b> .....	1
National Institutes of Health Research Grants.....	1
Compensation for Personal Services .....	1
Prior Audits of Graduate Student Compensation and Subsequent Actions.....	1
<b>OBJECTIVES, SCOPE, AND METHODOLOGY</b> .....	2
Objectives .....	2
Scope.....	2
Methodology .....	3
<b>RESULTS OF REVIEW</b> .....	3
<b>REASONABLENESS OF COMPENSATION CHARGES</b> .....	3
<b>STATISTICAL ESTIMATES</b> .....	4
<b>CONCLUSION</b> .....	6
<b>APPENDIX</b>	
<b>SAMPLED UNIVERSITIES AND COLLEGES</b>	

## **INTRODUCTION**

### **BACKGROUND**

We conducted this review at the request of two Members of Congress.

#### **National Institutes of Health Research Grants**

As the Federal Government's principal health research agency, NIH awards grants to universities and colleges to fund research projects. The highest dollar grant types are research project grants (R01s) and research center grants (P series). Research project grants support discrete, specified projects based on the NIH mission. Research center grants address broad research questions and involve collaborations of basic and clinical scientists. Collaborations involving more than one institution are strongly encouraged to provide optimal resources and expertise.

#### **Compensation for Personal Services**

Within NIH, the Office of Extramural Research is responsible for developing and implementing grant policies related to allowable and allocable costs, as specified by Office of Management and Budget (OMB) Circular A-21, "Cost Principles for Educational Institutions." The circular states that compensation for personal services covers all costs paid currently or accrued by an institution for employee services rendered during the grant performance period. Such direct costs include salaries, wages, and fringe benefits. Tuition remission and other forms of compensation paid as, or in lieu of, wages to students performing necessary work are allowable if, among other things, the payments are reasonable and for the performance of necessary work.

When preparing to submit an NIH grant proposal, universities and colleges identify the number of researchers and graduate students expected to work on the project and the associated salary and fringe benefit amounts. Tuition remission may be identified individually or combined with other direct costs. NIH does not, nor is it required to, maintain this graduate student compensation information in a comprehensive database. Additionally, requests for NIH reimbursement by universities and colleges do not provide a detailed breakdown of compensation costs. Therefore, the number of graduate student researchers receiving compensation, including tuition remission, from NIH grants and the compensation costs charged to the grants are not readily available.

#### **Prior Audits of Graduate Student Compensation and Subsequent Actions**

Reviews by the Office of Inspector General (OIG) and the Government Accountability Office (GAO) in 1994 and 1999, respectively, identified unreasonable graduate student compensation charges. OIG's review (A-01-94-04002) of four universities found \$5.7 million in unreasonable compensation at three of the four universities. GAO's review (GAO/OSI-99-8) found that one university charged federally sponsored research \$19.3 million for student "compensation in excess of what it paid first-level postdoctoral researchers" who performed "at a comparable level of work and effort."

Despite the findings in those reports, OMB stated in a letter to the House Committee on Commerce, dated February 16, 2000, that additional criteria regarding graduate student compensation were not warranted. However, with encouragement from OMB, NIH developed guidelines on maximum graduate student compensation costs. NIH Notice NOT-OD-02-017, dated December 10, 2001, states that these costs are considered reasonable if the payments do not exceed the amount paid to a first-year, postdoctoral scientist performing comparable work at the same institution. The maximum compensation awarded to support a graduate student is tied to the zero-level National Research Service Award<sup>1</sup> stipend in effect when NIH awarded the grant.

## **OBJECTIVES, SCOPE, AND METHODOLOGY**

### **Objectives**

Our objectives were to:

- determine whether universities and colleges limited the graduate student compensation charged to NIH research grants to the amount paid to a first-year, postdoctoral scientist performing comparable work at the same institution and to the National Research Service Award stipend in effect when NIH awarded the grants and
- provide statistical estimates of the number of grants with graduate student compensation costs charged; the number of researchers who received graduate student compensation, including tuition remission, from NIH grants; and the costs of such compensation.

### **Scope**

We limited our audit to research project grants and research center grants with direct costs greater than \$250,000 each for the period October 1, 2004, through September 30, 2005. For this period, NIH identified a universe of 6,786 research project grants totaling \$3.9 billion and 1,164 research center grants totaling \$1.7 billion that had direct costs greater than \$250,000 each. We selected a statistical sample of 100 grants from each of the two grant types. The 200 sampled grants were awarded to 97 universities and colleges. See the Appendix for a list of the sampled universities and colleges.

We limited our review to examining the graduate student compensation that universities and colleges charged to the sampled grants. We did not review the universities' and colleges' internal controls for reporting allowable costs to NIH.

---

<sup>1</sup>National Research Service Awards are individual NIH fellowships to support predoctoral and postdoctoral training of individuals to undertake biomedical, behavioral, or clinical research at domestic and foreign public and private institutions. The zero-level stipend is the amount of support provided to fellows with less than 1 year of postdoctoral experience at the time of the award.

We performed fieldwork at two pilot universities in our sample, the University of Michigan in Ann Arbor, Michigan, and Michigan State University in East Lansing, Michigan, and reviewed supporting documentation from the remaining 95 universities and colleges from June 2006 through February 2007.

## **Methodology**

For the 200 sampled grants, we first identified those grants with graduate student compensation costs charged. We found 97 such grants (not to be confused with the 97 universities and colleges in our sample). We compared each graduate student's compensation with the amount paid to a first-year, postdoctoral scientist performing comparable work at the same institution and with the National Research Service Award stipend in effect at the time of the award. To make these comparisons, we obtained the following information from the 97 universities and colleges:

- institutional policy governing graduate student researcher compensation;
- documentation supporting graduate student compensation costs charged to the selected grants during the audit period;
- documentation supporting any additional compensation provided to graduate students during the audit period;
- time-and-effort certifications documenting the graduate student researchers' level of effort; and
- the amount paid to first-year, postdoctoral scientists performing comparable work at the institutions.

For the 97 grants with graduate student compensation costs charged, we identified (1) the number of graduate student researchers who received compensation, (2) the total graduate student compensation costs charged, (3) the number of graduate student researchers who received tuition remission, and (4) the total tuition remission costs charged. We projected to our universe the number of grants with graduate student compensation costs charged, as well as items 1 through 4 in the preceding sentence.

We conducted our review in accordance with generally accepted government auditing standards.

## **RESULTS OF REVIEW**

### **REASONABLENESS OF COMPENSATION CHARGES**

For the 97 sampled NIH grants, universities and colleges limited graduate student compensation charges to the amount paid to a first-year, postdoctoral scientist performing comparable work at the same institution and to the National Research Service Award stipend in effect when NIH awarded the grants.

Table 1 provides an example of compensation costs that one university charged to an NIH grant for four graduate students. The total compensation costs charged for each student were less than the university's first-year, postdoctoral scientist salary of \$49,154 and the National Research Service Award stipend of \$35,568.

**Table 1: Example of Graduate Student Compensation Charges**

<b>Graduate Student</b>	<b>Salary</b>	<b>Fringe Benefits</b>	<b>Tuition Remission</b>	<b>Total Compensation</b>
1	\$14,021	\$6,341	\$6,529	\$26,891
2	10,483	3,010	4,512	18,005
3	7,884	1,372	854	10,110
4	895	336	593	1,824

### STATISTICAL ESTIMATES

Tables 2 through 6 summarize our sample results and provide estimates, for the period October 1, 2004, through September 30, 2005, of the number of NIH grants with graduate student compensation costs charged, the number of graduate student researchers who received the compensation, the total graduate student compensation costs charged, the number of graduate student researchers who received tuition remission from NIH grants, and the total tuition remission costs charged.

**Table 2: NIH Grants With Graduate Student Compensation Costs Charged**

<b>Grant Type</b>	<b>Number of Sampled Grants</b>	<b>Number of Sampled Grants With Graduate Student Compensation Charges</b>	<b>Estimated Number of Grants With Graduate Student Compensation Charges<sup>2</sup></b>
Research project grants	100	47	3,189
Research center grants	<u>100</u>	<u>50</u>	582
<b>Total</b>	<b>200</b>	<b>97</b>	

<sup>2</sup>The estimated number of research project grants at the 90-percent confidence interval is 2,613 to 3,775. The estimated number of research center grants at the 90-percent confidence interval is 486 to 678.

**Table 3: Graduate Students Receiving Compensation From NIH Grants**

<b>Grant Type</b>	<b>Number of Graduate Students Receiving Compensation From Sampled Grants</b>	<b>Estimated Number of Graduate Students Receiving Compensation From NIH Grants<sup>3</sup></b>
Research project grants	122	8,279
Research center grants	244	2,840

**Table 4: Graduate Student Compensation Costs Charged to NIH Grants**

<b>Grant Type</b>	<b>Graduate Student Compensation Charged to Sampled Grants</b>	<b>Estimated Graduate Student Compensation Charged to NIH Grants<sup>4</sup></b>
Research project grants	\$1,321,895	\$89,703,817
Research center grants	2,144,286	24,959,489

**Table 5: Graduate Students Receiving Tuition Remission From NIH Grants**

<b>Grant Type</b>	<b>Number of Graduate Students Receiving Tuition Remission From Sampled Grants</b>	<b>Estimated Number of Graduate Students Receiving Tuition Remission From NIH Grants<sup>5</sup></b>
Research project grants	36	2,433
Research center grants	54	629

<sup>3</sup>The estimated number for research project grants at the 90-percent confidence interval is 5,918 to 10,640. The estimated number for research center grants at the 90-percent confidence interval is 2,022 to 3,658.

<sup>4</sup>The estimated amount for research project grants at the 90-percent confidence interval is \$59,471,257 to \$119,936,377. The estimated amount for research center grants at the 90-percent confidence interval is \$16,764,235 to \$33,154,743.

<sup>5</sup>The estimated number for research project grants at the 90-percent confidence interval is 1,108 to 3,778. The estimated number for research center grants at the 90-percent confidence interval is 308 to 950.

**Table 6: Graduate Student Tuition Remission Costs Charged to NIH Grants**

<b>Grant Type</b>	<b>Graduate Student Tuition Remission Charged to Sampled Grants</b>	<b>Estimated Graduate Student Tuition Remission Charged to NIH Grants<sup>6</sup></b>
Research project grants	\$309,755	\$21,019,976
Research center grants	236,701	2,755,196

## CONCLUSION

Universities and colleges limited graduate student compensation charges to the amount paid to a first-year, postdoctoral scientist performing comparable work at the same institution and to the National Research Service Award stipend in effect when NIH awarded the grants.

This report contains no recommendations.

---

<sup>6</sup>The estimated amount for research project grants at the 90-percent confidence interval is \$3,294,700 to \$38,745,252. The estimated amount for research center grants at the 90-percent confidence interval is \$241,682 to \$5,268,711.

# **APPENDIX**

SAMPLED UNIVERSITIES AND COLLEGES



Baylor College of Medicine  
 Boston University Medical Campus  
 Brandeis University  
 California Institute of Technology  
 Case Western Reserve University  
 Columbia University Health Sciences  
 Cornell University  
 Drexel University College of Medicine  
 Duke University  
 Emory University  
 Georgetown University  
 Harvard University Medical School  
 Harvard University School of Public Health  
 Idaho State University  
 Indiana University  
 Indiana University – Purdue University at  
     Indianapolis  
 Jackson State University

Johns Hopkins University  
 Louisiana State University  
 Marshall University  
 Massachusetts Institute of Technology  
 Medical College of Georgia  
 Medical College of Wisconsin  
 Meharry Medical College  
 Michigan State University  
 Mississippi State University  
 Mount Sinai School of Medicine of New  
     York University  
 New York Medical College  
 Northwestern University  
 Ohio State University  
 Rockefeller University  
 Rutgers University  
 San Diego State University  
 Stanford University

State University of New York Downstate  
Medical Center  
State University of New York Stony Brook  
Texas A & M University  
Texas Agricultural Experiment Station  
Thomas Jefferson University  
Tufts University  
Tulane University  
University of Alabama  
University of Arizona  
University of California Berkeley  
University of California Davis  
University of California Irvine  
University of California – Lawrence  
Berkeley Lab  
University of California Los Angeles  
University of California San Diego  
University of California San Francisco  
University of California Santa Cruz  
University of Chicago  
University of Cincinnati  
University of Colorado Denver  
University of Connecticut School of  
Medicine/Dental  
University of Delaware  
University of Florida  
University of Georgia  
University of Idaho  
University of Illinois at Chicago  
University of Illinois Urbana-Champaign  
University of Iowa  
University of Kansas Lawrence  
University of Kentucky  
University of Maryland  
University of Medical/Dental of New Jersey  
University of Miami Coral Gables  
University of Miami Medical  
University of Michigan  
University of Minnesota  
University of Missouri  
University of North Carolina  
University of North Dakota  
University of Oklahoma  
University of Pennsylvania  
University of Pittsburgh  
University of Puerto Rico  
University of Rochester  
University of South Florida  
University of Southern California  
University of Tennessee  
University of Texas Brownsville  
University of Texas Dallas  
University of Texas Galveston  
University of Texas Houston  
University of Texas Houston Cancer Center  
University of Vermont  
University of Virginia  
University of Washington  
University of Wisconsin  
Vanderbilt University  
Virginia Commonwealth University  
Wake Forest University  
Washington University  
Wayne State University  
Yale University  
Yeshiva University