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TECHNICAL REPORT

Innovation in Academe

Federal R&D Funding and the Patenting Activities of U.S. Universities and Colleges

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Prepared for the Ewing Marion Kauffman Foundation



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This research was prepared for the Ewing Marion Kauffman Foundation and was conducted within the Kauffman-RAND Institute for Entrepreneurship Public Policy in the RAND Institute for Civil Justice.

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Preface

The Bayh-Dole Act of 1980 (Pub. L. 96-517) expressly gave colleges, universities, and other nonprofit entities the right, which had previously been presumptively held by the federal government itself, to patent inventions resulting from federally funded research and development (R&D) activities they conduct. In the nearly three decades since the Bayh-Dole Act changed the nation's patent laws, some academic institutions have been much more prolific than others at patenting technologies and other inventions discovered in their laboratories. There is substantial interest in better understanding the link between federal funding and innovation among U.S. colleges and universities.

This report contributes to such improved understanding in two ways. First, it provides data, heretofore unavailable, that contain complete information laboriously extracted from official federal data systems on the amount of federal R&D funding that was actually provided to U.S. colleges and universities by fiscal year (FY) and by federal agency. These data will be of use to researchers interested in examining a number of issues related to federal funding of R&D at universities and colleges. Second, the report uses these data to provide an exploratory analysis of federal R&D funding and the patenting activities at universities and colleges using funding data from FY 2005 to describe the characteristics of academic institutions that have shown a greater propensity to patent since the Bayh-Dole Act was passed. This research was conducted within the Kauffman-RAND Institute for Entrepreneurship Public Policy in the RAND Institute for Civil Justice

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Summary

Universities and colleges have long been recognized as critical sources of the innovative technologies needed to address the many challenges confronting the United States in particular, and society in general, from reducing pollution to improving transportation to curing disease. Since World War II, most university research and development (R&D) expenditures have been funded by the federal government. These R&D funds arrived at universities and colleges in the form of grants, cooperative agreements, or contracts that were, in virtually all cases, awarded competitively by a federal agency. Historically, the federal government was the presumptive owner of any intellectual property that resulted from federally funded R&D. The Bayh-Dole Act of 1980 (Pub. L. 96-517) changed this by explicitly shifting the right to patent any invention resulting from federally funded R&D from the federal government to the universities and colleges (and other nonprofit entities) at which the R&D was actually conducted. The act sparked the field of “Technology Transfer” for commercialization of academic research, in which universities and colleges not only patented the inventions that were discovered by their faculties (and students) using federal R&D funds but also actively marketed these inventions to others to promote their actual development and use and to generate income for the university or college from licensing the patents based on these inventions.

In the nearly three decades since the Bayh-Dole Act changed the nation’s patent laws, some academic institutions have been much more prolific at patenting technologies and other inventions discovered in their laboratories than have other academic institutions. The purpose of this report is twofold. First, we describe a new data set available to researchers that contains complete information on the federal R&D funds that were officially provided to U.S. colleges and universities by all federal agencies by fiscal year (FY). These data will be of use to researchers interested in examining a number of issues related to federal funding of R&D at universities and colleges. Second, the report uses these data to explore the relationship between academic institutions’ relative federal R&D funding levels and their patenting activities since the passage of Bayh-Dole, to identify some of the characteristics associated with a higher propensity to patent.¹

¹ Due to the lack of availability of some data at the time these analyses were conducted, an earlier iteration of the data was used for all analyses presented in this report. (See Appendix A for a more detailed explanation of the sets of data used.)

Construction of a Special Set of Data on Federal R&D Funding

To conduct this analysis, we constructed a special set of data on the federal R&D funding going to universities and colleges by federal agency and fiscal year from information contained in the RAND Database of Research and Development in the United States (RaDiUS). These data are described in detail in Appendix A. During its existence from the mid-1990s until 2008, RaDiUS systematically tracked all federal R&D funds from their point of planning and allocation at the White House and top federal agency levels, through the various levels of the federal bureaucracy to the many thousands of entities, including universities and colleges, that would actually conduct the R&D.

Analytical Approach

In this report, we present detailed descriptive information on the federal R&D funding received by academic institutions in FY 2005 using the set of data described in the previous section. To analyze patent data, we created a comprehensive data set of the utility and plant patents that had been granted by the U.S. Patent and Trademark Office (USPTO) to universities and colleges, using data obtained directly from the searchable database maintained by USPTO (PatFT for Patent Full-Text and Image Database). We looked both at the number of patents issued in 2005 and at the total number of patents issued between 1981 and 2005. Using these data sources, we ranked academic institutions in terms of their federal R&D funding as well as their patent output. We then compared rankings on the two measures to generate insights. We took this approach in recognition of the fact that there is not a causal link between the amount of federal R&D funds received by a university or college in a given year and the number of patents issued to that university or college in the same year. Rather, we wanted to see whether the two variables were related and, if so, how strongly.

Findings

We found that there is a strong association between the amount of federal R&D funds received by a university or college and the number of patents granted to the same institution. We found that 96 of the universities and colleges that were among the top 100 recipients of federal R&D funds in FY 2005 were also among the top 100 colleges and universities, or systems thereof, that obtained patents between 1981 and 2005.

We also found that academic institutions, or systems thereof, that have medical schools receive a significant share of all federal R&D funds going to universities and colleges and account for a significant share of all college and university patenting. Our analysis found that 44 percent of all federal R&D funds that went to the nation's universities and colleges in FY 2005 went directly to 125 of the nation's 126 medical schools. Eighty-four of the top 100 universities/colleges and university systems receiving patents from 1981 to 2005 had at least one of the nation's 126 medical schools. Among the top 50 universities/colleges and university systems receiving patents between 1981 and 2005, 39 institutions had one or more medical schools. Academic institutions that manage or operate a federally funded R&D center (FFRDC) were also among the top recipients of patents. Indeed, ten of the top 50 academic

institutions that obtained the most patents between 1981 and 2005 managed or operated FFRDCs; seven of the ten academic institutions that obtained the most patents between 1981 and 2005 managed or operated FFRDCs.

Overall, our analysis indicates a strong association between the amount of federal R&D funds received by an academic institution and the number of patented technological innovations actually generated by that same academic institution. There may be a number of explanations for this strong association. Interestingly, a careful review of the individual patents granted in 2005 to the six U.S. universities and colleges, or university systems thereof, at which more than 70 percent of all the federal R&D funds that they received in FY 2005 went to their medical school(s), indicates that the vast majority of the patents that were obtained by these institutions in 2005 were indeed related to biomedical technologies.

One factor that likely influences the number of patentable technologies generated by universities and colleges that conduct federally funded R&D is the nature (i.e., stage) of the R&D that specific federal agencies, and parts thereof, want universities and colleges to conduct with the funds that the agencies provide. That is, as part of the annual budget process, every federal agency that supports R&D activities—be they conducted intramurally by federal employees or extramurally by universities, colleges, and other entities—categorizes all of the R&D dollars that it spends as to whether these dollars are funding Basic Research, Applied Research, or Development. Of these three “Stages of R&D,” Applied Research is the R&D work that is most likely to generate patentable technologies for universities and colleges or any other entity conducting such R&D. Federal agencies fund drastically different portfolios of R&D activities—with direct ramifications for what R&D funded by federal agencies would most likely lead to patentable technologies. For example, 91 percent of the \$70+ billion that the U.S. Department of Defense (DoD) spent on the conduct of R&D in FY 2005 was for Development work; in contrast, only 7 percent was for Applied Research. The source of R&D funds that could most likely lead to patents is the U.S. Department of Health and Human Services (HHS). As the home of the National Institutes of Health (NIH), which controls more than 95 percent of HHS’s R&D funds, more than 40 percent of NIH’s funds were spent on Applied Research in FY 2005. Or, viewed another way, in FY 2005, NIH *alone* funded more Applied Research than did DoD, the National Aeronautics and Space Administration (NASA), the U.S. Department of Energy (DOE), the National Science Foundation (NSF), and the U.S. Department of Agriculture (USDA) *combined*.

Conclusions

The federal government has used its R&D spending power to stoke the creative engines at the nation’s universities and colleges primarily in the field of life sciences. The exploratory analysis provided here suggests that there is a relationship between the provision of funds by the federal government to universities and colleges for the conduct of Applied Research and the generation of patentable technologies by these institutions, at least some of which are hopefully usable and a few of which could be revolutionary. The set of data created to conduct this analysis and shared in conjunction with this report can hopefully be used by others to support additional research to improve policymakers’ understanding of the relationship between federal R&D funds provided to academic institutions on the one hand and university innovation and entrepreneurship on the other. Such insights could inform critical policy decisions, such as whether

the federal government should consider specifically providing funds to universities and colleges to conduct Applied Research on the many challenges presented by fields other than biomedical science and health care.

Acknowledgments

We wish to thank Susan Gates, director of the Kauffman-RAND Institute for Entrepreneurship Public Policy, who encouraged us to build on our work on the federal R&D funding going to universities and colleges that was presented in *Vital Assets: Federal Investment in Research and Development at the Nation's Universities and Colleges* (Fossum, Painter, Eiseman, et al., 2004) by exploring the relationship between federal R&D funding and patenting at universities and colleges in the United States. We also wish to thank the Ewing Marion Kauffman Foundation for providing funding for this research. We would also like to give a special thanks to our RAND colleagues, David Adamson, for his most insightful and helpful comments on formative drafts of this report; Neeraj Sood and Charles A. Goldman, for their careful reviews and comments on advance drafts of this report; and Robin Cole, Gail Kouril, and everyone who provided support and found valuable information about federal R&D funding and patenting at U.S. universities and colleges.

Abbreviations

AUTM	Association of University Technology Managers
CFDA	Catalog of Federal Domestic Assistance
CRADA	Cooperative Research and Development Agreement
DHS	U.S. Department of Homeland Security
DOC	U.S. Department of Commerce
DoD	U.S. Department of Defense
DOE	U.S. Department of Energy
DOI	U.S. Department of the Interior
DOJ	U.S. Department of Justice
DOL	U.S. Department of Labor
DOT	U.S. Department of Transportation
ED	U.S. Department of Education
EPA	Environmental Protection Agency
FFRDC	Federally Funded Research and Development Center
FY	fiscal year
HHS	U.S. Department of Health and Human Services
HUD	U.S. Department of Housing and Urban Development
ICJ	RAND Institute for Civil Justice
KRI	Kauffman-RAND Institute for Entrepreneurship Public Policy
LCME	Liaison Committee of Medical Education
LIGO	Laser Interferometer Gravitational Wave Observatory
NASA	National Aeronautics and Space Administration
NIH	National Institutes of Health

NRC	U.S. Nuclear Regulatory Commission
NSF	National Science Foundation
R&D	Research and Development
RaDiUS	RAND Database of Research and Development in the United States
SEI	Software Engineering Institute
SSA	Social Security Administration
USDA	U.S. Department of Agriculture
USPTO	U.S. Patent and Trademark Office
VA	U.S. Department of Veterans Affairs

Introduction

Background

Universities and colleges have long been recognized as critical sources of the innovative technologies needed to address the many challenges confronting the United States in particular, and society in general, from reducing pollution to improving transportation to curing disease (Rosenberg and Nelson, 1994). Since the establishment of the National Science Foundation (NSF) in 1950, the federal government has been the primary source of funds used by U.S. universities and colleges to pay for the significant costs of conducting research and development (R&D) to discover these innovative technologies. For the three decades following the establishment of NSF, the entity that paid for the R&D—namely, the federal government—presumptively owned any intellectual property that resulted from the R&D. And, while the federal government customarily obtained patents on any inventions resulting from the R&D it funded, the federal government did little to encourage that these patented inventions be licensed to potential users or in any way be commercialized. Indeed, an audit of some 28,000 patents held by the federal government in 1975 found that fewer than 5 percent of these patented inventions had ever been licensed for potential commercial use (Ancker-Johnson, 1976, pp. 890–897). In contrast, approximately one-third of the patents owned by universities were licensed in 1975 (Ancker-Johnson, 1976, p. 897).

All this changed in December 1980, when U.S. patent and trademark law was amended by the Bayh-Dole Act (Pub. L. 96-517) and the presumptive right to patent any invention resulting from federally funded R&D was shifted from the federal government to the universities and colleges (and other nonprofit entities) at which the R&D was actually conducted. This change, which was specifically designed “to promote the utilization of inventions arising from federally supported research and development” (35 U.S.C. 200), launched the era in which universities and colleges not only patented the inventions that were discovered by their faculties (and students) using federal R&D funds but also marketed these inventions to others to promote their actual development and use and to generate income for the university or college through the licenses based on these patents.

Purpose of This Report

In the nearly three decades since the Bayh-Dole Act changed the nation’s patent laws, some academic institutions have been much more prolific at patenting technologies and other inventions discovered in their laboratories than have other academic institutions. For example, in

fiscal year (FY) 2005, a handful of universities and colleges reported to the Association of University Technology Managers (AUTM) that they received more than 100 patents on inventions discovered in their laboratories, while several others reported having received none. Most reported receiving at least one, but fewer than 25 patents, in FY 2005.

Clearly, there are numerous factors that influence the patenting success of an academic institution, such as the size and quality of its faculty, the disciplinary focus of its R&D, and the supportiveness of institutional policies (Henderson, Jaffe, and Trajtenberg, 1998; Mowery and Ziedonis, 2001; Shane, 2004). However, with between 58 and 68 percent of university R&D expenditures funded by the federal government each year (NSF, 2007b), it seems likely that the level and nature of funding each university or college receives would affect the number of patents for which the institution applies.

This report contributes to the understanding of the relationship between federal R&D funding and the patenting activities at universities and colleges. First, it provides data containing systematic and complete information on federal R&D funding to U.S. colleges and universities, by fiscal year and by federal agency. The version of these data, which accompanies this report, will be of use to researchers interested in examining a number of issues related to the funding of R&D by the federal government at universities and colleges. Second, the report uses these data to conduct an exploratory analysis of the relationship between federal R&D funding and the patenting activities at universities and colleges, to identify some of the characteristics of institutions with a higher propensity to patent.

How This Report Is Organized

Chapter Two provides details about the data and the methodology used to examine the federal R&D funding and the patenting activities at universities and colleges in the United States. Chapter Three presents the findings of our analysis of the relationship between federal R&D funds provided to and the patenting activities of universities and colleges. Chapter Four provides a discussion of the types of R&D work that federal agencies fund (i.e., Basic Research, Applied Research, and Development) and the potential implications for the production of patentable technologies. Chapter Five presents our main conclusions and explores the implications of this analysis for future discussions. Following Chapter Five is Appendix A, which describes the comprehensive data outputs we created on federal R&D funding, by federal agency and fiscal year. This appendix describes the underlying data from which the sets of data were created, discusses the caveats and limitations of the data, and provides information about the specific version of the data used and an overview of the data fields. Appendix B provides supporting information for the descriptive analysis presented in the body of the report. Specifically, it contains 27 tables that present data on the differences in federal R&D funding by academic institution.

Data and Methodology

Federal Research and Development Funding Data

A central objective of this project was to create a resource of comprehensive data that details the federal R&D funds by fiscal year and federal agency that went to every four-year accredited public and private university and college in the 50 states, the District of Columbia, and Puerto Rico from FY 1993 to FY 2006 using the RAND Database of Research and Development in the United States (RaDiUS). These data are described in Appendix A, which provides a detailed description of the underlying database, including caveats and limitations. During its tenure, RaDiUS systematically tracked all federal R&D funds from their point of planning and allocation at the White House and top agency levels, through the various levels of bureaucracy in each agency to the point at which the R&D funds were finally transferred as tasks to individual researchers in federal laboratories and as grants, cooperative agreements, or contracts (i.e., individual awards) to the researchers in nonfederal entities that would actually conduct the R&D. As such, RaDiUS provided information at the level of individual tasks or awards to researchers, thereby providing more-detailed information on this topic than NSF's annual Survey of Research and Development Expenditures at Universities and Colleges, the data most commonly used in analyses of federal R&D funding and university patenting.

We then used these data to conduct an exploratory analysis of the relationship between federal R&D funding and innovation at universities and colleges as exemplified by their patenting activities. In this exploratory analysis, we used the FY 2005 data from RaDiUS, which contained the most-recent data available at the time that this analysis was conducted, tabulating the resulting data from a variety of perspectives including and excluding medical schools. The results of this exercise are presented in the tables in Appendix B.¹

Great care was taken in this exploratory analysis to accurately identify all of the federal R&D awards that went to medical schools, because of the unparalleled amount of them each year² and the dramatic increase in patenting noted among the faculty at medical schools in the past two decades (Azoulay, Michigan, and Sampat, 2007). Since the vast majority of federal R&D funds going to medical schools comes from the National Institutes of Health (NIH) at the U.S. Department of Health and Human Services (HHS), a special data file that was

¹ These tables parallel but do not exactly replicate the tables featured in *Vital Assets: Federal Investment in Research and Development at the Nation's Universities and Colleges*, because the focus in the latter report was on the differences in federal R&D funding by state, while the focus in this report is on the differences in federal R&D funding by academic institution.

² This was first documented with data from RaDiUS for FY 2001 and FY 2002 and featured in *Vital Assets* (Fossum, Painter, Eiseman, et al., 2004),

provided by NIH that identified all the awards it made to medical schools in FY 2005 was of tremendous help in doing this.

A critical step in preparing the data for this exploratory analysis was to determine the top 100 universities and colleges that received federal R&D funds in FY 2005 and see how these rankings had changed since FY 2002. Table 2.1 shows that the top 100 universities and colleges that received federal R&D funds in FY 2002, as reported in *Vital Assets*, are very much the same as the top 100 universities and colleges that received federal R&D funds in FY 2005. Indeed, the top five schools are identical: Johns Hopkins University; University of Washington; University of Pennsylvania; University of Michigan, Ann Arbor; and University of California, Los Angeles.

Only five schools fell out of the top 100 (i.e., George Washington University, Thomas Jefferson University, University of South Florida, Indiana University at Bloomington, and University of Massachusetts at Amherst), while five schools joined the top 100 (i.e., Illinois Institute of Technology, University of Louisville, Virginia Polytechnic Institute, Louisiana State University at Baton Rouge, and University of Nevada, Reno) between FY 2002 and FY 2005. The other 95 schools that were in the top 100 in FY 2002 were also in the top 100 in FY 2005.

Please note that the rankings presented in Table 2.1 are based on the amount of funds that were obligated by the federal government to each university and college in the fiscal year specified. Indeed, as was the case with *Vital Assets*, all information about federal funding presented in this report is based on *obligations*—i.e., the total dollars that the federal government has agreed in a specific fiscal year to provide to a university or college to cover the costs of R&D work that will be performed by the university or college in that fiscal year *or* in some future fiscal year. Because the federal government records all of its transactions—be they pursuant to the provisions of a grant, cooperative agreement, or contract—that result in monetary awards to third parties (e.g., universities and colleges) exclusively as *obligations*, this was the only unit of measure available for our analysis.

Please note that *obligations* are not the same as *outlays* or *expenditures*, the latter of which involve the disbursement of funds for use in the current fiscal year only, as opposed to some future fiscal year as well. In general, since most federal grant and cooperative agreement awards cover two to three years and most federal contract awards cover three to four years, this means that the funds emanating from federal awards are distributed in uneven increments over a number of years, with the largest increment generally being disbursed in the first year of the award. The distinction between obligations on the one hand and outlays and expenditures on the other is important, however, because an obligation of funds by the federal government to a university or college for an extraordinarily large R&D project can have a notable effect on the total amount of federal R&D funds credited to a single institution in a given fiscal year. Such awards are not common, however, so the amount of federal R&D funds going to specific universities and colleges customarily trends quite evenly from one fiscal year to the next. There are exceptions, however. In FY 2005, Tufts University received \$142 million under a cooperative agreement from the Agricultural Research Service within the U.S. Department of Agriculture (USDA) for the operation and management of the Human Nutrition Research Center on Aging, which lifted it from 99th place in FY 2002 to 30th place in FY 2005, among the top 100 universities and colleges receiving federal R&D funds. Similarly, in FY 2005, the California Institute of Technology received \$32 million under a cooperative agreement from NSF for the operation and management of the Laser Interferometer Gravitational-Wave Observatory (LIGO).

Table 2.1
Comparison of Top 100 Universities and Colleges Receiving Federal R&D Funds in FYs 2002 and 2005

University/College	FY 2002		FY 2005	
	Ranked by Amount of Federal R&D Funds Received	Amount of Federal R&D Funds Received	Ranking by Amount of Federal R&D Funds Received	Amount of Federal R&D Funds Received
Johns Hopkins University	1	968,346,779	1	1,155,609,430
University of Washington, Seattle	2	518,105,691	2	628,139,276
University of Pennsylvania	3	458,468,017	3	549,117,228
University of Michigan, Ann Arbor	4	428,841,708	4	517,250,528
University of California, Los Angeles	5	412,554,554	5	507,467,336
Stanford University	7	386,003,275	6	481,181,883
Massachusetts Institute of Technology	8	380,832,879	7	479,423,914
University of California, San Diego	6	405,563,825	8	473,182,259
University of Wisconsin, Madison	9	364,986,252	9	465,274,597
University of California, San Francisco	11	356,743,364	10	451,693,531
Duke University	15	327,315,626	11	444,327,434
University of Pittsburgh	12	336,901,314	12	441,873,571
Columbia University	13	334,901,399	13	438,684,985
Washington University, St. Louis	10	360,440,828	14	420,227,382
Harvard University	14	332,530,435	15	399,417,957
Yale University	16	312,309,557	16	380,022,567
Cornell University	21	258,544,760	17	345,330,015
University of North Carolina, Chapel Hill	18	307,967,854	18	343,477,234
University of Minnesota, Twin Cities	17	309,877,336	19	339,956,498
University of Southern California	22	223,851,269	20	314,070,232
Case Western Reserve University	27	195,106,497	21	297,608,251
Vanderbilt University	24	223,742,350	22	295,708,474
University of Alabama, Birmingham	20	260,792,305	23	290,651,163
University of California, Berkeley	23	223,779,543	24	269,866,086
University of Chicago	35	172,475,309	25	264,128,670
Baylor College of Medicine	19	273,931,037	26	263,130,189
University of Rochester	28	189,376,514	27	252,596,225
Emory University	30	189,186,474	28	239,958,494
University of California, Davis	29	189,264,822	29	234,162,945
Tufts University	99	56,197,903	30	232,876,514

Table 2.1—Continued

University/College	FY 2002		FY 2005	
	Ranked by Amount of Federal R&D Funds Received	Amount of Federal R&D Funds Received	Ranking by Amount of Federal R&D Funds Received	Amount of Federal R&D Funds Received
Pennsylvania State University, University Park	25	221,313,180	31	230,875,878
Northwestern University	41	161,234,045	32	229,322,291
University of Illinois, Urbana-Champaign	26	206,263,136	33	220,544,098
Ohio State University, Columbus	34	173,332,020	34	215,595,110
Boston University	33	175,652,126	35	213,621,164
University of Arizona	31	184,787,624	36	206,739,998
University of Florida	39	165,041,811	37	206,710,710
University of Texas, Austin	48	140,822,610	38	201,335,486
Oregon Health and Science University	38	166,774,546	39	192,104,104
University of Maryland, Baltimore	53	128,207,993	40	191,012,200
University of Virginia, Charlottesville	37	167,559,784	41	190,670,573
New York University	46	143,198,057	42	190,351,046
Mount Sinai School of Medicine	44	150,446,538	43	188,722,487
University of Colorado System Health Sciences Center	36	171,217,091	44	188,027,474
University of Iowa	32	176,503,090	45	187,025,230
University of Hawaii, Manoa	54	120,815,130	46	186,070,738
Mayo Medical School	45	148,057,109	47	180,730,843
University of Texas, Southwestern Medical Center at Dallas	40	162,647,874	48	180,550,608
University of Illinois, Chicago	47	142,885,797	49	171,331,435
University of California, Irvine	51	135,703,283	50	170,440,930
University of Texas, MD Anderson Cancer Center	50	137,474,907	51	164,159,571
Yeshiva University	49	138,929,910	52	160,899,649
University of Utah	43	154,795,096	53	160,161,156
California Institute of Technology	93	63,951,569	54	154,117,521
University of Colorado, Boulder	42	156,690,828	55	152,954,539
University of Maryland, College Park	52	134,507,747	56	149,814,426
Georgia Institute of Technology	58	106,881,077	57	138,030,467
University of Miami	55	119,676,758	58	135,253,036
Rutgers University, New Brunswick	60	106,544,770	59	134,042,623

Table 2.1—Continued

University/College	FY 2002		FY 2005	
	Ranked by Amount of Federal R&D Funds Received	Amount of Federal R&D Funds Received	Ranking by Amount of Federal R&D Funds Received	Amount of Federal R&D Funds Received
Texas A&M University, College Station	68	94,889,514	60	133,311,836
University of Medicine and Dentistry of New Jersey	59	106,805,489	61	131,391,776
Purdue University	69	92,739,428	62	130,434,880
Wake Forest University	57	109,377,419	63	129,919,994
Colorado State University	84	78,080,076	64	127,780,880
University of Cincinnati	56	109,719,032	65	123,850,451
Michigan State University	64	100,967,246	66	123,413,908
University of Kentucky	61	105,092,273	67	122,054,491
University of Massachusetts, Medical School at Worcester	71	91,766,651	68	119,232,276
University of Connecticut	65	96,507,764	69	118,344,483
University of Texas, Medical Branch— Galveston	80	80,894,637	70	118,205,731
Princeton University	82	79,803,995	71	115,183,872
University of Texas Health Science Center at Houston	63	101,688,198	72	108,176,787
Dartmouth College	67	95,271,548	73	107,049,852
Wayne State University	62	102,689,881	74	106,619,233
Indiana University—Purdue University at Indianapolis	66	95,879,375	75	102,734,563
University of California, Santa Barbara	89	71,720,775	76	101,676,071
University of New Mexico	73	88,509,905	77	99,664,933
State University of New York, Stony Brook	74	87,644,268	78	98,484,770
Carnegie Mellon University	78	81,445,898	79	98,047,172
University of Missouri, Columbia	92	67,457,235	80	97,733,374
Illinois Institute of Technology	—	27,563,805	81	95,249,954
University of Louisville	—	36,523,328	82	92,093,174
University of Georgia	72	90,673,538	83	91,733,976
Georgetown University	75	83,320,760	84	91,406,663
Medical University of South Carolina	70	92,117,028	85	89,474,940
Iowa State University	95	60,424,044	86	88,762,215
Virginia Polytechnic Institute	—	55,767,661	87	85,307,243

Table 2.1—Continued

University/College	FY 2002		FY 2005	
	Ranked by Amount of Federal R&D Funds Received	Amount of Federal R&D Funds Received	Ranking by Amount of Federal R&D Funds Received	Amount of Federal R&D Funds Received
Oregon State University	90	69,895,307	88	85,090,046
Tulane University	96	59,745,952	89	85,045,786
Virginia Commonwealth University	83	79,317,379	90	84,842,848
Medical College of Wisconsin	77	81,926,851	91	83,167,179
University of Nevada, Reno	—	41,153,658	92	83,006,849
Louisiana State University at Baton Rouge	—	44,981,609	93	82,579,936
Rockefeller University	91	69,404,849	94	82,523,825
University of Texas, Health Science Center at San Antonio	79	81,405,984	95	82,019,724
Arizona State University, Tempe	97	56,955,731	96	81,461,760
Brown University	85	75,200,770	97	81,358,802
University of Vermont	88	71,957,411	98	81,119,943
North Carolina State University	94	63,026,231	99	81,033,194
State University of New York, Buffalo	86	74,169,652	100	80,062,350
George Washington University (includes Mount Vernon campus)	76	82,962,959	107	65,372,929
Thomas Jefferson University	81	80,137,024	104	76,540,310
University of South Florida, Tampa	87	72,080,182	101	77,213,824
Indiana University, Bloomington	98	56,276,073	102	76,945,710
University of Massachusetts, Amherst	100	55,792,193	111	60,049,575

SOURCE: RaDiUS.

tional Wave Observatory (LIGO), which lifted it from 93rd place in FY 2002 to 54th place in FY 2005 among the top 100 universities and colleges receiving federal R&D funds. Despite these two extraordinary shifts in rank, the general consistency of the academic institutions ranked in the top 100 recipients of federal R&D funds for the two available data points (i.e., FY 2002 and FY 2005) was deemed to be similar enough that the rankings for FY 2005 could be used for purposes of comparison throughout this analysis.

In FY 2005, there were 37 Federally Funded Research and Development Centers (FFRDCs), of which 11 were managed and operated by individual universities and colleges, five were managed and operated by consortia of between nine and 89 universities and colleges, and the remaining 21 were managed and operated by industrial firms and nonprofit institutions. However, none of the funds received by universities to manage and operate FFRDCs have been included in the federal R&D funds going to universities presented in Table 2.1, for the following reasons: (1) none of these FFRDCs is actually part of the universities that manage and operate them; (2) the three FFRDCs managed and operated by the University

of California (Lawrence Berkeley National Laboratory, Lawrence Livermore National Laboratory, and Los Alamos National Laboratory) are not connected to any individual campus, thereby making it impossible to allocate the funding received by these FFRDCs among the various campuses of the University of California; and (3) there is no way to accurately and fairly allocate the funds that were received by the five FFRDCs managed by university consortia (the Fermi National Accelerator Laboratory, the Thomas Jefferson National Accelerator Facility, the National Center for Atmospheric Research, the National Optical Astronomy Observatory, and the National Radio Astronomy Observatory) among the individual academic institutions that comprise these consortia. Although funds for FFRDCs have not been included in Table 2.1, information about the federal funds going to FFRDCs is provided separately in Table 2.2.

The data presented in Table 2.1 do include the federal R&D funds that went to five specific research institutes that are actual divisions or teaching affiliates of universities: the Johns Hopkins University Applied Physics Laboratory, the Southern Research Institute at the University of Alabama at Birmingham, the Whitehead Institute for Biomedical Research and the Woods Hole Oceanographic Institution at the Massachusetts Institute of Technology, and the Yale Southern Observatory at Yale University. These five research institutes are readily distinguishable from FFRDCs that are managed and operated by universities, in that these research institutes are integral parts of the core academic and research programs of the universities (i.e., they share research facilities or faculty and staff); hence, the federal R&D funds each research institute received has been credited to the university with which it is affiliated.³

U.S. Patent Data

To determine the ranking of universities and colleges by the number of patents that were issued by the U.S. Patent and Trademark Office (USPTO) to each university and college in FY 2005, we consulted a variety of sources of information. The first potential source of data on the patenting activities of universities and colleges that we consulted for this analysis was the information that was gathered by AUTM for FY 2005. Specifically, we reviewed the information on the patenting activities of universities and colleges that was self-reported by various academic institutions to AUTM in response to AUTM's (2007) licensing survey for FY 2005. Upon close examination of this information, however, we discovered that several major universities and colleges did not provide information to AUTM's survey—most notably, Stanford University, Columbia University, Yale University, and Princeton University—hence, AUTM's data were not complete. We also discovered that “certificates” of plant-variety protection that are issued by USDA but that are not actually patents had been counted in the AUTM report as if they were patents. And finally, we learned that the patents reported to AUTM had not necessarily been granted in FY 2005 but instead had been granted in whatever “current” year on which an institution decided to report (i.e., either a calendar year or a fiscal year). For these reasons, we decided not to use the information gathered by AUTM.

³ While there are undoubtedly other institutions that are involved in research that are in some way connected to various universities and colleges, we did not include them in this analysis, as we did not have the resources to investigate precisely how each such institution was connected to the university or college, so we limited the inclusion of such institutions to those that were included in *Vital Assets*.

Table 2.2
Federal Obligations for R&D to Federally Funded R&D Centers Operated by Universities, Colleges, and University Consortia in FY 2005
(thousands of dollars)

FFRDC	Total	DHS	DOC	DoD	DOE	HHS	NASA	NSF	Other
Ames Laboratory	21,960	0	0	131	21,829	0	0	0	0
Argonne National Laboratory	285,905	11,912	54	4,413	248,921	11,571	0	224	8,810
Ernest Orlando Lawrence Berkeley National Laboratory	336,289	9,817	0	3,256	282,401	40,473	0	342	0
Fermi National Accelerator Laboratory	278,344	0	0	0	278,344	0	0	0	0
Jet Propulsion Laboratory	1,626,594	0	0	10,168	0	345	1,616,081	0	0
Lawrence Livermore National Laboratory	1,035,836	134,216	40	53,948	839,856	7,776	0	0	0
Lincoln Laboratory	362,756	4,598	0	353,645	0	0	0	0	4,513
Los Alamos National Laboratory	1,111,021	49,343	0	22,072	1,024,248	12,632	0	110	2,616
National Astronomy and Ionosphere Center	10,515	0	0	0	0	0	0	10,515	0
National Center for Atmospheric Research	101,669	0	2,515	5,515	0	0	0	86,072	7,567
National Optical Astronomy Observatories	61,036	0	0	60	0	0	0	60,976	0
National Radio Astronomy Observatory	47,228	0	0	0	0	0	0	47,228	0
Princeton Plasma Physics Laboratory	55,300	0	0	100	55,200	0	0	0	0
Software Engineering Institute	23,063	0	0	22,565	0	0	0	0	498
Stanford Linear Accelerator Center	188,092	0	1,200	500	185,630	762	0	0	0
Thomas Jefferson National Accelerator Facility	85,218	0	0	4,908	80,310	0	0	0	0

SOURCE: NSF (2008).

NOTE: DHS = U.S. Department of Homeland Security. DOC = U.S. Department of Commerce. DoD = U.S. Department of Defense. DOE = U.S. Department of Energy. NASA = National Aeronautics and Space Administration.

To conduct this analysis, we created a comprehensive set of data on the utility and plant patents that have been granted by the USPTO to universities and colleges, using data obtained directly from the searchable database maintained by USPTO known as Patent Full-Text and Image.⁴ Specifically, we used the “Advanced Search” option to search on the name of each academic institution, as well as all reasonable variations of that name. For example, when searching for patents awarded to Johns Hopkins University, we searched both “Johns Hopkins” *and* “John Hopkins.” For the University of Alabama, we searched “University of Alabama,” “Univ of Alabama,” “University of AL,” “Univ of AL,” and so on. Each link to a patent that was retrieved by a search was then opened to make sure that it did indeed belong to the appropriate academic institution (i.e., assignee) and to check the year in which the patent was granted (i.e., issued). While this was laborious, it was necessary to avoid the possibility of getting incorrect patent counts. For example, in searching for “University of Chicago,” we also pulled up “Loyola University of Chicago,” which is an entirely different academic institution.

Early on in this searching process, we discovered that the patenting of technologies has been centralized for several public academic institutions that have multiple campuses (e.g., University of California, State University of New York, University of Texas); consequently, it was not possible to consistently and accurately determine the number of patents obtained by each of the individual campuses that comprise these university systems—the latter of which were the data points used in ranking the top 100 recipients of federal R&D funds. As a result, only systemwide information is presented in this report on the patenting activities of all multicampus academic institutions. Please note that, to ensure comparability of data for purposes of these portions of this analysis, the information on the amount of federal funds received in FY 2005 was aggregated to the systemwide level for all multicampus institutions.

Also, we discovered that a number of universities and colleges have formal technology-transfer organizations that are listed as the assignees for their patents (e.g., the majority of the patents from the University of Alabama at Birmingham are filed by and assigned to the UAB Research Foundation). Great efforts were made to identify these technology-transfer organizations to ensure correct patent counts, including (1) searching individual university and college Web sites to identify the names of such organizations; (2) checking the AUTM (2007) licensing survey for FY 2005 to see what patent assignee names had been reported to it; and (3) checking the USPTO (2007) report “U.S. Colleges and Universities: Utility Patent Grants, Calendar Years 1969–2005,” to identify the various assignee names it listed as being associated with a given university or college.

We also searched on the names and reasonable variations thereof of the five research institutes that are affiliated with universities to ensure that any patents that had been granted in the names of these institutes were also consistently included in the patent counts of their parent universities.

The 11 FFRDCs managed and operated by individual academic institutions, the five FFRDCs managed and operated by university consortiums, and the agencies that sponsored

⁴ The USPTO grants three types of patents: (1) utility patents, which are granted for the invention or discovery of any new and useful process, machine, article of manufacture, or composition of matter, or any new and useful improvement thereof; (2) plant patents, which are granted for the invention or discovery and asexual reproduction of any distinct and new variety of plant; and (3) design patents, which are granted for the invention of a new, original, and ornamental design for an article of manufacture. Since design patents do not involve the advancement of scientific or technical knowledge resulting from R&D, only utility patents (both regular and reissued) and plant patents were included in the final patent counts for universities and colleges presented in this report.

these FFRDCs are shown in Table 2.3. None of the FFRDCs managed by university consortia is separately identified in this analysis, as there was no way to accurately and fairly allocate the patents that were issued to these FFRDCs among the individual academic institutions that comprise these consortia.

Due to the very specialized nature of the R&D conducted at FFRDCs, these centers are not likely to be prolific generators of patents. The connection between universities and FFRDCs does affect the patenting record of universities, however, as some of the universities that manage and operate these centers file patent applications for discoveries resulting from R&D conducted at FFRDCs in the name of the university, rather than in the name of the FFRDC. Consequently, the patents granted to a university that manages and operates an FFRDC may include some, and perhaps all, of the patents resulting from R&D that was actually conducted at the FFRDC. For example, all of the patents granted for discoveries made at the Lincoln Laboratory were granted in the name of the Massachusetts Institute of Technology (see Lincoln Laboratory, undated). Likewise, all of the patents granted for discoveries made at the Lawrence Livermore National Laboratory were granted in the name of the University of California (i.e., the Regents of the University of California) until the management of the laboratory was assumed by Lawrence Livermore National Security, LLC, on October 1, 2007

Table 2.3
Federally Funded R&D Centers Managed and Operated by Individual Universities or Colleges or University Consortia in Fiscal Year 2005

FFRDC	University/College	Sponsoring Agency
Ames Laboratory	Iowa State University	DOE
Argonne National Laboratory	University of Chicago	DOE
Ernest Orlando Lawrence Berkeley National Laboratory	University of California	DOE
Fermi National Accelerator Laboratory	Universities Research Association	DOE
Jet Propulsion Laboratory	California Institute of Technology	NASA
Lawrence Livermore National Laboratory	University of California	DOE
Lincoln Laboratory	Massachusetts Institute of Technology	DoD
Los Alamos National Laboratory	University of California	DOE
National Astronomy and Ionosphere Center	Cornell University	NSF
National Center for Atmospheric Research	University Corporation for Atmospheric Research	NSF
National Optical Astronomy Observatories	Association of Universities for Research in Astronomy	NSF
National Radio Astronomy Observatory	Associated Universities	NSF
Princeton Plasma Physics Laboratory	Princeton University	DOE
Software Engineering Institute	Carnegie Mellon University	DoD
Stanford Linear Accelerator Center	Stanford University	DOE
Thomas Jefferson National Accelerator Facility	Southeastern Universities Research Association	DOE

(see LLNL, 2009). In recognition of this fact, in its annual surveys of the patenting activities of universities and colleges, AUTM expressly allows the responding institutions that manage a federal laboratory (e.g., an FFRDC) to decide for themselves whether to include the patenting data for the federal laboratory in the patenting information reported for the university or college (see AUTM, 2005, p. 35, note xv).

Since it appears from our investigation that most universities that manage and operate FFRDCs do indeed include the patents granted for R&D conducted at these centers among the patents assigned directly to the university, the patent counts presented in this analysis reflect this reality. Specifically, the patents for the California Institute of Technology include those for the Jet Propulsion Laboratory; the patents for Stanford University include those for the Linear Accelerator Center; the patents for the University of California include those for Lawrence Berkeley, Lawrence Livermore, and Los Alamos National Laboratories; the patents for the University of Chicago include those for Argonne National Laboratory; the patents for Iowa State University include those for Ames Laboratory; the patents for the Massachusetts Institute of Technology include those for Lincoln Laboratory; the patents for Princeton University include those for the Plasma Physics Laboratory; the patents for Cornell University include those for the National Astronomy and Ionosphere Center; and the patents for Carnegie Mellon University include those for Software Engineering Institute. In searching for patents granted to colleges and universities, we also searched on the names of the 11 FFRDCs that are managed and operated by universities, as well as reasonable variations of these names (e.g., Lawrence Berkeley National Laboratory and Lawrence Berkeley Laboratory). This was done to ensure that any patents that may have been granted in the name of the 11 FFRDCs instead of the name of the managing and operation university were consistently included in the patent counts of these universities.⁵ Ideally, none of the patents resulting from R&D conducted at these 11 FFRDCs would be included in the patent counts of the universities that manage and operate these FFRDCs, but accurately and consistently separating these two pools of patents will not be possible until all of the universities that manage and operate FFRDCs are required to obtain all patents associated with R&D conducted at the FFRDCs in the name of the FFRDC.

While extracting the information on the number of patents issued by the USPTO from the USPTO database, we quickly realized that the number of patents issued in a single year was only a snapshot of an institution's overall patenting activities. Consequently, if an institution had several more patents issued in FY 2005 than in previous years, its ranking among academic institutions by the number of patents issued could be inordinately high or vice versa. Furthermore, since the average time between filing for a patent and the issuance of a patent is about 24 months, preceded by many months or years of R&D to make the discovery on which

⁵ A thorough search of the USPTO database to identify patents granted specifically to the 11 FFRDCs managed and operated by colleges and universities between 1981 and 2005 found only 23 patents assigned in the name of only four of the 11 FFRDCs: Jet Propulsion Laboratory, Argonne National Laboratory, Los Alamos National Laboratory, and Ernest Orlando Lawrence Berkeley National Laboratory. For each of these FFRDCs, there were very few patents assigned specifically in the name of the FFRDC, and some of the patents were assigned jointly to both the FFRDC and the managing university or college. Specifically, of the two patents assigned to the Jet Propulsion Laboratory, one was jointly assigned to the California Institute of Technology; of the 13 patents assigned to Argonne National Laboratory, seven were jointly assigned to the University of Chicago; all four patents assigned to Los Alamos National Laboratory were jointly assigned to the University of California; and of the four patents assigned to Ernest Orlando Lawrence Berkeley National Laboratory, three were jointly assigned to the University of California.

the patent is based, we decided that the fairest representation of an academic institution's patenting activities would be the number of patents issued over a span of years (USPTO, 2007). Given that the Bayh-Dole Act was signed into law on December 12, 1980, we decided that the appropriate period of time over which to count the patents issued to academic institutions was from January 1, 1981, through December 31, 2005. Hence, the total number of utility and plant patents issued during this 25-year period is the measure of a university's, college's, or university system's patenting activities that is used in this report.

Since several other measures of an academic institution's patenting activities were readily available, however, we decided to assemble the ranking information from all of them to see how they compared.

Table 2.4 shows that, despite the variations in these measures of patenting activities, the rankings of each university, college, or university system by the number of patents issued are remarkably consistent across these various measures. Specifically, Table 2.4 compares our preferred ranking based on the number of patents issued by the USPTO to academic institutions from 1981 through 2005 (fourth data column) with the ranking based on the patent counts presented in the AUTM licensing survey for FY 2005 (first data column) and our preliminary ranking based on the number of patents issued by the USPTO in FY 2005 alone (second data column). It also compares our preferred ranking with a ranking based on the patent counts for each university and college contained in the USPTO (2007) report "U.S. Colleges and Universities: Utility Patent Grants, Calendar Year 1969–2005" (third data column).

This latter report presents data on the number of utility patents issued to the 200 academic institutions that spent the most on R&D in FY 2004 according to Table 27 in NSF's (2006) report, *Academic Research and Development Expenditures, Fiscal Year 2004*. Note that the information in Table 27 is based on NSF's FY 2004 "Survey of Research and Development Expenditures at Universities and Colleges" (NSF, 2004). Note also that the patent counts in the report are distributed by the year in which the applications for the patents were filed with the USPTO, rather than by the year in which the patents were actually issued (i.e., granted) by the USPTO.

Table 2.4
Comparison of Sources of Data for Number of U.S. Patents Issued to Top 100 Universities and Colleges

University/College (includes university systems)	Rank Using AUTM Data for FY 2005	Rank Using USPTO Data for FY 2005	Rank Using USPTO Report for 1969–2005	Rank Using USPTO Data for 1981–2005
University of California System	1	1	1	1
Massachusetts Institute of Technology	3	2	2	2
University of Texas System	4	4	3	3
Stanford University	n.a.	5	5	4
California Institute of Technology	2	3	4	5
University of Wisconsin System	5	7	6	6
Johns Hopkins University	6	8	7	7
Cornell University	11	13	8	8
University of Florida	9	9	9	9

Table 2.4—Continued

University/College (includes university systems)	Rank Using AUTM Data for FY 2005	Rank Using USPTO Data for FY 2005	Rank Using USPTO Report for 1969–2005	Rank Using USPTO Data for 1981–2005
University of Michigan System	7	6	10	10
University of Minnesota	11	15	11	11
Columbia University	n.a.	10	13	12
University of Pennsylvania	18	11	14	13
State University of New York System	20	22	12	14
Iowa State University	53	55	15	15
University of Chicago	36	25	38	16
Harvard University	14	25	18	17
University of Washington, Seattle	16	17	19	18
Michigan State University	26	32	16	19
Duke University	30	29	21	20
Georgia Institute of Technology	15	11	17	21
North Carolina State University	13	14	20	22
University of Utah	23	37	23	23
University of Illinois System	8	17	25	24
Pennsylvania State University System	18	20	22	25
University of Alabama System	10	34	35	26
Washington University, St. Louis	43	37	24	27
University of North Carolina, Chapel Hill	29	21	27	28
University of Maryland System	23	23	26	29
New York University	36	31	34	30
University of Pittsburgh	43	45	29	31
Ohio State University, Columbus	17	25	28	32
Rutgers University, New Brunswick	36	37	33	33
Yale University	n.a.	23	32	34
Purdue University	28	29	44	35
Texas A&M University, College Station	n.a.	32	36	36
Rockefeller University	n.a.	66	30	37
Northwestern University	36	37	39	38
University of Southern California	20	16	41	39
Princeton University	n.a.	17	31	40
University of Iowa	35	45	40	40

Table 2.4—Continued

University/College (includes university systems)	Rank Using AUTM Data for FY 2005	Rank Using USPTO Data for FY 2005	Rank Using USPTO Report for 1969–2005	Rank Using USPTO Data for 1981–2005
Louisiana State University System	36	37	37	42
University of Kentucky	53	36	46	42
Virginia Polytechnic Institute	48	58	55	44
Boston University	68	71	47	45
University of Nebraska System	36	58	42	46
Emory University	48	48	48	47
University of Rochester	65	48	57	48
University of Massachusetts System	53	58	48	49
Baylor College of Medicine	59	73	48	50
Mayo Medical School	25	25	44	51
University of Georgia	43	52	60	52
University of Tennessee System	81	77	53	53
Carnegie Mellon University	22	73	51	54
University of Arkansas System	32	37	52	54
Vanderbilt University	32	54	56	56
University of New Mexico	53	62	54	57
University of Virginia, Charlottesville	78	73	59	58
University of Missouri System	63	73	61	59
Wayne State University	68	66	63	60
Case Western Reserve University	50	66	64	61
University of South Florida	32	48	58	62
University of Akron	65	77	64	63
University of Colorado System	63	62	43	64
Arizona State University, Tempe	30	48	82	65
University of Central Florida	26	34	64	66
University of Connecticut	53	37	67	66
University of Cincinnati	73	62	68	68
Yeshiva University	n.a.	45	74	69
Brown University	81	55	70	70
University of Delaware	68	83	78	71
Northeastern University	68	77	71	72
Florida State University	46	53	69	73

Table 2.4—Continued

University/College (includes university systems)	Rank Using AUTM Data for FY 2005	Rank Using USPTO Data for FY 2005	Rank Using USPTO Report for 1969–2005	Rank Using USPTO Data for 1981–2005
Temple University	50	88	73	74
Tufts University	59	62	75	75
Clemson University	65	66	72	76
Mount Sinai School of Medicine	73	71	77	76
Georgetown University	87	96	79	78
Rensselaer Polytechnic Institute	36	58	76	79
University of Medicine and Dentistry of New Jersey	n.a.	88	80	80
Washington State University	50	66	84	81
University of Hawaii System	85	86	85	82
University of Kansas	73	88	81	83
Virginia Commonwealth University	90	99	83	84
Oregon Health and Science University	53	77	62	85
University of Arizona	72	94	94	86
University of Miami	86	96	92	87
Dartmouth College	83	83	86	88
Indiana University System	59	77	91	89
Colorado State University	88	94	96	90
Wake Forest University	78	96	86	91
Tulane University	90	100	90	92
Illinois Institute of Technology	n.a.	88	97	93
University of Houston System	83	83	89	94
Auburn University	59	55	92	95
University of Rhode Island	73	88	100	96
Michigan Technological University	73	77	99	97
Rice University	46	37	95	98
Oregon State University	88	86	88	99
University of Vermont	78	88	98	100

Comparison of the Federal Research and Development Funds Provided to and the Patenting Activities of Universities and Colleges

As anticipated, we found that there is a strong association between the amount of federal R&D funds received by a university or college and the number of patents issued to the same institution. Specifically, as Table 3.1 shows, we found that 96 of the universities and colleges that were among the top 100 recipients of federal R&D funds in FY 2005 were also among the top 100 colleges and universities, or systems thereof, that obtained the most patents between 1981 and 2005. Only one academic institution (i.e., University of Nebraska System) that was not among the top 100 recipients of federal R&D funds in FY 2005 was among the top 50 academic institutions obtaining the most patents between 1981 and 2005.

Because of the need to combine several institutions into statewide university systems in order to accurately count the number of patents issued to academic institutions, 18 “new” universities and colleges (shown in Table 3.1 as “>100”) that were not among the top 100 recipients of federal R&D funds in FY 2005 were able to slip into the bottom half of the 100 colleges and universities, or systems thereof, that obtained the most patents between 1981 and 2005. Worthy of note is that one of these latter institutions (i.e., University of Central Florida) had been among the top 100 recipients of federal R&D funds in FY 2002, ranking 87th among universities and colleges in that fiscal year, and missed the top 100 in FY 2005 by only one place, having fallen to 101st in rank.

As shown at the bottom of Table 3.1, the four universities and colleges that were among the top 100 recipients of federal R&D funds in FY 2005 that *were not* among the 100 colleges and universities, or systems thereof, that obtained the most patents between 1981 and 2005 had patent counts that were notably lower than those of the institutions that *were* among the 100 colleges and universities, or systems thereof, that obtained the most patents between 1981 and 2005.

The Role of Federally Funded Research and Development Centers and Affiliated Research Institutes in Patenting at Universities and Colleges

As noted in Chapter Two, because the patents associated with FFRDCs are generally included in the overall patent counts credited to the individual universities or university systems that manage and operate the FFRDCs, these latter academic institutions will likely rank among the academic institutions with the most patents issued. As Table 3.2 shows, this is indeed the case.

Specifically, Table 3.2 shows that seven of the 11 FFRDCs that are managed and operated by individual academic institutions are connected to universities or university systems that rank among the ten academic institutions receiving the most patents between 1981 and 2005;

Table 3.1
Top 100 Universities, Colleges, and University Systems, by Number of U.S. Patents Issued Between 1981 and 2005, Detailed

Rank by Number of Patents Issued to University/College, 1981–2005	University/College (includes university systems)	Campuses Belonging to University System That Ranked Among the Top 100 Recipients of Federal R&D Funds in FY 2005	Rank by Amount of Federal R&D Funds Received in FY 2005	Number of Patents Issued to University/College, 1981–2005	Number of Medical Schools Present at University/College	Number of FFRDCs and Affiliated Research Institutes at University/College
1	University of California System			5,348	5	3
		University of California, Berkeley	24			
		University of California, Davis	29			
		University of California, Irvine	50			
		University of California, Los Angeles	5			
		University of California, San Diego	8			
		University of California, San Francisco	10			
		University of California, Santa Barbara	76			
2	Massachusetts Institute of Technology		7	2,650	0	3

Table 3.1—Continued

Rank by Number of Patents Issued to University/College, 1981–2005	University/College (includes university systems)	Campuses Belonging to University System That Ranked Among the Top 100 Recipients of Federal R&D Funds in FY 2005	Rank by Amount of Federal R&D Funds Received in FY 2005	Number of Patents Issued to University/College, 1981–2005	Number of Medical Schools Present at University/College	Number of FFRDCs and Affiliated Research Institutes at University/College
3	University of Texas System			1,681	4	0
		University of Texas, Austin	38			
		University of Texas, Health Science Center at San Antonio	95			
		University of Texas, MD Anderson Cancer Center	51			
		University of Texas, Medical Branch—Galveston	70			
		University of Texas, Southwestern Medical Center at Dallas	48			
		University of Texas Health Science Center at Houston	72			
4	Stanford University		6	1,451	1	1
5	California Institute of Technology		54	1,425	0	1
6	University of Wisconsin System			1,198	1	0
		University of Wisconsin, Madison	9			

Table 3.1—Continued

Rank by Number of Patents Issued to University/College, 1981–2005	University/College (includes university systems)	Campuses Belonging to University System That Ranked Among the Top 100 Recipients of Federal R&D Funds in FY 2005	Rank by Amount of Federal R&D Funds Received in FY 2005	Number of Patents Issued to University/College, 1981–2005	Number of Medical Schools Present at University/College	Number of FFRDCs and Affiliated Research Institutes at University/College
7	Johns Hopkins University		1	1,103	1	1
8	Cornell University		17	972	1	1
9	University of Florida		37	921	1	0
10	University of Michigan System			814	1	0
		University of Michigan, Ann Arbor	4			
11	University of Minnesota			785	2	0
		University of Minnesota, Twin Cities	19			
12	Columbia University		13	695	1	0
13	University of Pennsylvania		3	678	1	0
14	State University of New York System			677	4	0
		State University of New York, Buffalo	100			
		State University of New York, Stony Brook	78			
15	Iowa State University		86	676	0	1
16	University of Chicago		25	653	1	1
17	Harvard University		15	638	1	0

Table 3.1—Continued

Rank by Number of Patents Issued to University/College, 1981–2005	University/College (includes university systems)	Campuses Belonging to University System That Ranked Among the Top 100 Recipients of Federal R&D Funds in FY 2005	Rank by Amount of Federal R&D Funds Received in FY 2005	Number of Patents Issued to University/College, 1981–2005	Number of Medical Schools Present at University/College	Number of FFRDCs and Affiliated Research Institutes at University/College
18	University of Washington, Seattle		2	636	1	0
19	Michigan State University		66	551	1	0
20	Duke University		11	547	1	0
21	North Carolina State University		99	526	0	0
22	University of Utah		53	515	1	0
23	Georgia Institute of Technology		57	496	0	0
24	University of Illinois System			477	1	0
		University of Illinois, Chicago	49			
		University of Illinois, Urbana-Champaign	33			
25	Washington University, St. Louis		14	471	1	0
26	University of Alabama System			465	1	1
		University of Alabama, Birmingham	23			

Table 3.1—Continued

Rank by Number of Patents Issued to University/College, 1981–2005	University/College (includes university systems)	Campuses Belonging to University System That Ranked Among the Top 100 Recipients of Federal R&D Funds in FY 2005	Rank by Amount of Federal R&D Funds Received in FY 2005	Number of Patents Issued to University/College, 1981–2005	Number of Medical Schools Present at University/College	Number of FFRDCs and Affiliated Research Institutes at University/College
27	Pennsylvania State University System			444	1	0
		Pennsylvania State University, University Park	31			
28	University of North Carolina, Chapel Hill		18	440	1	0
29	University of Maryland System			432	1	0
		University of Maryland, Baltimore	40			
		University of Maryland, College Park	56			
30	New York University		42	430	1	0
31	University of Pittsburgh		12	415	1	0
32	Ohio State University, Columbus		34	410	1	0
33	Rutgers University, New Brunswick		59	406	0	0
34	Yale University		16	402	1	1
35	Purdue University		62	397	0	0
36	Texas A&M University, College Station		60	391	0	0
37	Rockefeller University		94	379	0	0

Table 3.1—Continued

Rank by Number of Patents Issued to University/College, 1981–2005	University/College (includes university systems)	Campuses Belonging to University System That Ranked Among the Top 100 Recipients of Federal R&D Funds in FY 2005	Rank by Amount of Federal R&D Funds Received in FY 2005	Number of Patents Issued to University/College, 1981–2005	Number of Medical Schools Present at University/College	Number of FFRDCs and Affiliated Research Institutes at University/College
38	Northwestern University		32	372	1	0
39	University of Southern California		20	367	1	0
40	University of Iowa		45	365	1	0
40	Princeton University		71	365	0	1
42	University of Kentucky		67	335	1	0
43	Virginia Polytechnic Institute		87	322	0	0
44	Louisiana State University System			314	2	0
		Louisiana State University at Baton Rouge	93			
45	Boston University		35	306	1	0
46	University of Nebraska System		>100	305	1	0
47	Emory University		28	298	1	0
48	University of Rochester		27	282	1	0
49	University of Massachusetts System			278	1	0
		University of Massachusetts, Medical School at Worcester	68			

Table 3.1—Continued

Rank by Number of Patents Issued to University/College, 1981–2005	University/College (includes university systems)	Campuses Belonging to University System That Ranked Among the Top 100 Recipients of Federal R&D Funds in FY 2005	Rank by Amount of Federal R&D Funds Received in FY 2005	Number of Patents Issued to University/College, 1981–2005	Number of Medical Schools Present at University/College	Number of FFRDCs and Affiliated Research Institutes at University/College
50	Baylor College of Medicine		26	277	1	0
51	Mayo Medical School		47	275	1	0
52	University of Georgia		83	266	0	0
53	University of Tennessee System		>100	258	1	0
54	Carnegie Mellon University		79	255	0	1
54	University of Arkansas System		>100	255	1	0
		University of Arkansas, Fayetteville	>100			
		University of Arkansas for Medical Sciences	>100			
56	Vanderbilt University		22	252	1	0
57	University of New Mexico		77	242	1	0
58	University of Virginia, Charlottesville		41	241	1	0
59	University of Missouri System			240	2	0
		University of Missouri, Columbia	80			
60	Wayne State University		74	229	1	0

Table 3.1—Continued

Rank by Number of Patents Issued to University/College, 1981–2005	University/College (includes university systems)	Campuses Belonging to University System That Ranked Among the Top 100 Recipients of Federal R&D Funds in FY 2005	Rank by Amount of Federal R&D Funds Received in FY 2005	Number of Patents Issued to University/College, 1981–2005	Number of Medical Schools Present at University/College	Number of FFRDCs and Affiliated Research Institutes at University/College
61	Case Western Reserve University		21	216	1	0
62	University of South Florida		>100	213	1	0
63	University of Akron		>100	205	0	0
64	University of Colorado System			203	1	0
		University of Colorado System Health Sciences Center	44			
		University of Colorado, Boulder	55			
65	Arizona State University, Tempe		96	189	0	0
66	University of Connecticut		69	188	1	0
66	University of Central Florida		>100	188	0	0
68	University of Cincinnati		65	183	1	0
69	Yeshiva University		52	179	1	0
70	Brown University		97	177	1	0
71	University of Delaware		>100	176	0	0
72	Northeastern University		>100	172	0	0

Table 3.1—Continued

Rank by Number of Patents Issued to University/College, 1981–2005	University/College (includes university systems)	Campuses Belonging to University System That Ranked Among the Top 100 Recipients of Federal R&D Funds in FY 2005	Rank by Amount of Federal R&D Funds Received in FY 2005	Number of Patents Issued to University/College, 1981–2005	Number of Medical Schools Present at University/College	Number of FFRDCs and Affiliated Research Institutes at University/College
73	Florida State University		>100	163	0	0
74	Temple University		>100	162	1	0
75	Tufts University		30	158	1	0
76	Mount Sinai School of Medicine		43	155	1	0
76	Clemson University		>100	155	0	0
78	Georgetown University		84	154	1	0
79	Rensselaer Polytechnic Institute		>100	151	0	0
80	University of Medicine and Dentistry of New Jersey		61	143	2	0
81	Washington State University		>100	138	0	0
82	University of Hawaii System			133	1	0
		University of Hawaii, Manoa	46			
83	University of Kansas		>100	124	1	0
84	Virginia Commonwealth University		90	122	1	0

Table 3.1—Continued

Rank by Number of Patents Issued to University/College, 1981–2005	University/College (includes university systems)	Campuses Belonging to University System That Ranked Among the Top 100 Recipients of Federal R&D Funds in FY 2005	Rank by Amount of Federal R&D Funds Received in FY 2005	Number of Patents Issued to University/College, 1981–2005	Number of Medical Schools Present at University/College	Number of FFRDCs and Affiliated Research Institutes at University/College
85	Oregon Health and Science University		39	119	1	0
86	University of Arizona		36	114	1	0
87	University of Miami		58	113	1	0
88	Dartmouth College		73	112	1	0
89	Indiana University System			111	1	0
		Indiana University–Purdue University at Indianapolis	75			
90	Colorado State University		64	109	0	0
91	Wake Forest University		63	108	1	0
92	Tulane University		89	107	1	0
93	Illinois Institute of Technology		81	103	0	0
94	University of Houston System		>100	101	0	0
95	Auburn University		>100	100	0	0
96	University of Rhode Island		>100	84	0	0
97	Michigan Technological University		>100	83	0	0

Table 3.1—Continued

Rank by Number of Patents Issued to University/College, 1981–2005	University/College (includes university systems)	Campuses Belonging to University System That Ranked Among the Top 100 Recipients of Federal R&D Funds in FY 2005	Rank by Amount of Federal R&D Funds Received in FY 2005	Number of Patents Issued to University/College, 1981–2005	Number of Medical Schools Present at University/College	Number of FFRDCs and Affiliated Research Institutes at University/College
98	Rice University		>100	81	0	0
99	Oregon State University		88	79	0	0
100	University of Vermont		98	69	1	0
Universities/colleges in top 100 recipients of federal R&D funds in FY 2005 that were not in top 100 for patenting						
	Medical University of South Carolina		85	51	1	0
	Medical College of Wisconsin		91	40	1	0
	University of Louisville		82	20	1	0
	University of Nevada System			13	1	0
		University of Nevada, Reno	92			

Table 3.2
The 100 Universities and Colleges with the Most U.S. Patents Issued Between 1981 and 2005,
Condensed

Rank by No. of Patents Issued to University/College, 1981–2005	University/College (includes university systems)	No. of Patents Issued to University/College, 1981–2005	No. of FFRDCs and Affiliated Research Institutes at University/College	No. of Medical Schools at University/College
1	University of California System	5,348	3 (3 FFRDCs for DOE)	5
2	Massachusetts Institute of Technology	2,650	3 (1 FFRDC for DoD)	0
3	University of Texas System	1,681	0	4
4	Stanford University	1,451	1 (1 FFRDC for DOE)	1
5	California Institute of Technology	1,425	1 (1 FFRDC for NASA)	0
6	University of Wisconsin System	1,198	0	1
7	Johns Hopkins University	1,103	1	1
8	Cornell University	972	1 (1 FFRDC for NSF)	1
9	University of Florida	921	0	1
10	University of Michigan System	814	0	1
11	University of Minnesota	785	0	2
12	Columbia University	695	0	1
13	University of Pennsylvania	678	0	1
14	State University of New York	677	0	4
15	Iowa State University	676	1 (1 FFRDC for DOE)	0
16	University of Chicago	653	1 (1 FFRDC for DOE)	1
17	Harvard University	638	0	1
18	University of Washington, Seattle	636	0	1
19	Michigan State University	551	0	1
20	Duke University	547	0	1
21	North Carolina State University	526	0	0
22	University of Utah	515	0	1
23	Georgia Institute of Technology	496	0	0
24	University of Illinois System	477	0	1
25	Washington University, St. Louis	471	0	1
26	University of Alabama System	465	1	1
27	Pennsylvania State University System	444	0	1
28	University of North Carolina, Chapel Hill	440	0	1
29	University of Maryland System	432	0	1

Table 3.2—Continued

Rank by No. of Patents Issued to University/College, 1981–2005	University/College (includes university systems)	No. of Patents Issued to University/College, 1981–2005	No. of FFRDCs and Affiliated Research Institutes at University/College	No. of Medical Schools at University/College
30	New York University	430	0	1
31	University of Pittsburgh	415	0	1
32	Ohio State University, Columbus	410	0	1
33	Rutgers University, New Brunswick	406	0	0
34	Yale University	402	1	1
35	Purdue University	397	0	0
36	Texas A&M University, College Station	391	0	0
37	Rockefeller University	379	0	0
38	Northwestern University	372	0	1
39	University of Southern California	367	0	1
40	University of Iowa	365	0	1
40	Princeton University	365	1 (1 FFRDC for DOE)	0
42	University of Kentucky	335	0	1
43	Virginia Polytechnic Institute	322	0	0
44	Louisiana State University System	314	0	2
45	Boston University	306	0	1
46	University of Nebraska System	305	0	1
47	Emory University	298	0	1
48	University of Rochester	282	0	1
49	University of Massachusetts System	278	0	1
50	Baylor College of Medicine	277	0	1
51	Mayo Medical School	275	0	1
52	University of Georgia	266	0	0
53	University of Tennessee System	258	0	1
54	Carnegie Mellon University	255	1 (1 FFRDC for DoD)	0
54	University of Arkansas System	255	0	1
56	Vanderbilt University	252	0	1
57	University of New Mexico	242	0	1
58	University of Virginia, Charlottesville	241	0	1
59	University of Missouri System	240	0	2
60	Wayne State University	229	0	1

Table 3.2—Continued

Rank by No. of Patents Issued to University/College, 1981–2005	University/College (includes university systems)	No. of Patents Issued to University/College, 1981–2005	No. of FFRDCs and Affiliated Research Institutes at University/College	No. of Medical Schools at University/College
61	Case Western Reserve University	216	0	1
62	University of South Florida	213	0	1
63	University of Akron	205	0	0
64	University of Colorado	203	0	1
65	Arizona State University, Tempe	189	0	0
66	University of Connecticut	188	0	1
66	University of Central Florida	188	0	0
68	University of Cincinnati	183	0	1
69	Yeshiva University	179	0	1
70	Brown University	177	0	1
71	University of Delaware	176	0	0
72	Northeastern University	172	0	0
73	Florida State University	163	0	0
74	Temple University	162	0	1
75	Tufts University	158	0	1
76	Mount Sinai School of Medicine	155	0	1
76	Clemson University	155	0	0
78	Georgetown University	154	0	1
79	Rensselaer Polytechnic Institute	151	0	0
80	University of Medicine and Dentistry of New Jersey	143	0	2
81	Washington State University	138	0	0
82	University of Hawaii System	133	0	1
83	University of Kansas	124	0	1
84	Virginia Commonwealth University	122	0	1
85	Oregon Health and Science University	119	0	1
86	University of Arizona	114	0	1
87	University of Miami	113	0	1
88	Dartmouth College	112	0	1
89	Indiana University System	111	0	1
90	Colorado State University	109	0	0

Table 3.2—Continued

Rank by No. of Patents Issued to University/College, 1981–2005	University/College (includes university systems)	No. of Patents Issued to University/College, 1981–2005	No. of FFRDCs and Affiliated Research Institutes at University/College	No. of Medical Schools at University/College
91	Wake Forest University	108	0	1
92	Tulane University	107	0	1
93	Illinois Institute of Technology	103	0	0
94	University of Houston System	101	0	0
95	Auburn University	100	0	0
96	University of Rhode Island	84	0	0
97	Michigan Technological University	83	0	0
98	Rice University	81	0	0
99	Oregon State University	79	0	0
100	University of Vermont	69	0	1

nine of them are connected to universities, colleges, or university systems that rank among the 20 academic institutions receiving the most patents between 1981 and 2005; and ten of them are connected to universities or university systems that rank among the 50 academic institutions receiving the most patents between 1981 and 2005.

Carnegie Mellon University, which manages the Software Engineering Institute (SEI), is the only academic institution that manages an FFRDC that is *not* ranked among the 50 universities, colleges, and university systems receiving the most patents between 1981 and 2005. Carnegie Mellon ranked 54th among universities, colleges, and university systems for the number of patents received between 1981 and 2005. This anomaly is undoubtedly a consequence of the fact that the innovations (i.e., software) that disproportionately result from the federally funded R&D conducted by SEI are copyrighted rather than patented. And, because the Bayh-Dole Act focuses exclusively on the rights involving federally funded R&D conducted by universities and colleges that is patentable, the intellectual property associated with much of the R&D conducted by SEI (i.e., a copyright) would not be included in the measures of the number of patents issued.

The role of non-FFRDC research institutes that are affiliated with universities, colleges, and university systems appears to be similar to that of FFRDCs, as three of the five affiliated research institutes included in this analysis are connected to universities, colleges, or university systems that ranked among the ten academic institutions receiving the most patents between 1981 and 2005. Specifically, both the Woods Hole Oceanographic Institute and the Whitehead Institute of Biomedical Research are affiliated with the Massachusetts Institute of Technology, which ranked second for patent receipts among academic institutions between 1981 and 2005, and the Applied Physics Laboratory is affiliated with Johns Hopkins University, which ranked seventh for patent receipts among academic institutions between 1981 and 2005. The other two affiliated research institutes included in this analysis are connected to universities, colleges, or university systems that ranked among the 40 academic institutions receiving the most

patents between 1981 and 2005. Specifically, the Yale Southern Observatory is affiliated with Yale University, which ranked 33rd for patent receipts among academic institutions between 1981 and 2005, and the Southern Research Institute is affiliated with the multicampus system of the University of Alabama, which ranked 36th for patent receipts among academic institutions between 1981 and 2005.

Of particular interest regarding the five non-FFRDC-affiliated research institutes included in this analysis is the notable difference in role that each of these institutes appears to play at its affiliated university based on the proportion of the university's federal R&D funds that is directly attributable to the affiliated research institute. Specifically, as shown in Table 3.3, the Applied Physics Laboratory appears to play a significant role in the R&D activities of Johns Hopkins University, accounting for 42 percent of all federal R&D funds received by the university in FY 2005. In sharp contrast is the Yale Southern Observatory, which accounted for less than 1 percent of all the federal R&D funds received by Yale University in FY 2005. In between are the Whitehead Institute for Biomedical Research and the Woods Hole Oceanographic Institute, which collectively accounted for 18 percent of all federal R&D funds received by the Massachusetts Institute of Technology in FY 2005, and the Southern Research Institute, which accounted for 14 percent of all federal R&D funds received by the University of Alabama System in FY 2005.

Table 3.3
Universities, Colleges, and Affiliated Research Institutes

Rank by No. of Patents Issued to University/College, 1981–2005	University or College and Affiliated Research Institute	No. of Patents Issued to University/College, 1981–2005	Federal R&D Funds Received by University/College in FY 2005 [included in total]	Percentage of Federal R&D Funds Received by Affiliated Research Institute
2	Massachusetts Institute of Technology	2,650	479,423,914	
	Whitehead Institute for Biomedical Research		[21,266,355]	4
	Woods Hole Oceanographic Institute		[69,013,793]	14
7	Johns Hopkins University	1,103	1,155,609,430	
	Applied Physics Laboratory		[481,054,146]	42
33	Yale University	402	380,022,567	
	Yale Southern Observatory		[168,141]	>1
36	University of Alabama System	465	331,213,949	
	Southern Research Institute		[36,056,419]	11

The Role of Medical Schools in Patenting

By far, the most significant finding of *Vital Assets* was the discovery that an enormous proportion of the federal R&D funds that go to the nation's universities and colleges each year go directly to medical schools—academic units that are present at only a small fraction of the nation's thousands of universities and colleges. Specifically, *Vital Assets* (Fossum, Painter, Eiseman, et al., 2004, p. 12) found that, “of all the federal funds that went to the nation's universities and colleges, 42 percent in FY 2001 and 45 percent in FY 2002 went directly to medical schools.” The analysis herein further confirms the significance of this result by finding that 44 percent of all federal R&D funds that went to the nation's universities and colleges in FY 2005 went directly to 125 of the nation's 126 medical schools.¹ In short, in FY 2005, the average medical school in the nation received \$92 million of federal R&D funds. Or, viewed from a slightly different perspective, in FY 2005, the average medical school in the nation received more federal R&D funds than did all but the top 81 universities and colleges in the nation ranked according to the total amount of federal R&D funds they received.

Given the strong relationship between the amount of federal R&D funds received by a university or college and the number of patents issued to the same institution (see Table 3.1), it is therefore not surprising to discover that 84 (i.e., 67 percent) of the nation's 126 medical schools are found among the 100 universities, colleges, and university systems receiving the most patents between 1981 and 2005 (see Table 3.2).

And, as Table 3.4 shows, medical schools play a greater-than-average role in the federally funded R&D activities of more than half of the universities, colleges, and university systems that rank among the 50 universities, colleges, and university systems receiving the most patents between 1981 and 2005.

Specifically, as Table 3.4 shows, the percentage of federal R&D funds that went directly to the medical schools at 26 of the 50 universities, colleges, and university systems receiving the most patents between 1981 and 2005 exceeded the 44-percent average for the amount of *all* federal R&D funds that went directly to medical schools at *all* of the nation's universities and colleges in FY 2005 (see highlighted institutions). Baylor College of Medicine was the extreme example: Not surprisingly, virtually all of the federal R&D funds it received in FY 2005 went to its medical school because the institution contains so few academic units (e.g., pharmacology) that are not actually divisions of its medical school. At such diverse academic institutions as the University of Pennsylvania, Duke University, Washington University in St. Louis, Yale University, and Emory University, however, more than 70 percent of all federal R&D funds that each institution received in FY 2005 went directly to its medical school.

With the resources available to conduct this analysis, it was not possible to trace the specific technological innovations that were the subject of each patent issued by USPTO to a given academic institution back to a specific R&D award that was made by the federal government to that same academic institution. The data presented in this analysis indicate that there is a strong relationship between the amount of federal R&D funds received by an academic institution and the number of technological innovations actually patented by that same academic

¹ The Uniformed Services University of the Health Sciences consists of the School of Medicine, the Graduate Education Program, and the Graduate School of Nursing, all of which are eligible to receive federal R&D funds. However, in FY 2005, no federal R&D funds were obligated to the School of Medicine at the Uniformed Services University of the Health Sciences.

Table 3.4
Percentage of FY 2005 Federal R&D Funds Going to Medical Schools at 50 Universities and Colleges Having the Most U.S. Patents Granted Between 1981 and 2005

Rank by No. of Patents Granted to University/College, 1981–2005	University/College (includes university systems)	No. of Patents Granted to University/College, 1981–2005	No. of Medical Schools at University/College	Federal R&D Funds Received by University/College in FY 2005, Including Medical School(s)	Federal R&D Funds Received by University/College in FY 2005, Excluding Medical School(s)	Federal R&D Funds in Going to Medical School(s) in FY 2005	Percent Medical School(s) Funds of Total Federal R&D Funds Received in FY 2005
1	University of California System	5,348	5	2,342,957,223	1,291,343,089	1,051,614,134	45
2	Massachusetts Institute of Technology	2,650	0	479,423,914	479,423,914	0	0
3	University of Texas System	1,681	4	918,047,844	469,237,772	448,810,072	49
4	Stanford University	1,451	1	481,181,883	218,817,568	262,364,315	55
5	California Institute of Technology	1,425	0	154,117,521	154,117,521	0	0
6	University of Wisconsin System	1,198	1	476,298,979	348,856,429	127,442,550	27
7	Johns Hopkins University	1,103	1	1,155,609,430	743,000,644	412,608,786	36
8	Cornell University	972	1	345,330,015	222,108,892	123,221,123	36
9	University of Florida	921	1	206,710,710	125,561,724	81,148,986	39
10	University of Michigan System	814	1	521,507,815	263,724,194	257,783,621	49
11	University of Minnesota	785	2	344,620,178	207,857,752	136,762,426	40
12	Columbia University	695	1	438,684,985	199,965,591	238,719,394	54
13	University of Pennsylvania	678	1	549,117,228	157,328,704	391,788,524	71
14	State University of New York System	677	4	265,617,470	145,229,869	120,387,601	45
15	Iowa State University	676	0	88,762,215	88,762,215	0	0
16	University of Chicago	653	1	264,128,670	95,606,944	168,521,726	64
17	Harvard University	638	1	399,417,957	202,851,603	196,566,354	49

Table 3.4—Continued

Rank by No. of Patents Granted to University/College, 1981–2005	University/College (includes university systems)	No. of Patents Granted to University/College, 1981–2005	No. of Medical Schools at University/College	Federal R&D Funds Received by University/College in FY 2005, Including Medical School(s)	Federal R&D Funds Received by University/College in FY 2005, Excluding Medical School(s)	Federal R&D Funds in Going to Medical School(s) in FY 2005	Percent Medical School(s) Funds of Total Federal R&D Funds Received in FY 2005
18	University of Washington, Seattle	636	1	628,139,276	337,256,200	290,883,076	46
19	Michigan State University	551	1	123,413,908	76,911,360	46,502,548	38
20	Duke University	547	1	444,327,434	115,879,714	328,447,720	74
21	North Carolina State University	526	0	81,033,194	81,033,194	0	0
22	University of Utah	515	1	160,161,156	77,348,410	82,812,746	52
23	Georgia Institute of Technology	496	0	138,030,467	138,030,467	0	0
24	University of Illinois System	477	1	392,211,699	314,106,296	78,105,403	20
25	Washington University, St. Louis	471	1	420,227,382	48,408,922	371,818,460	88
26	University of Alabama System	465	1	331,213,949	158,276,149	172,937,800	52
27	Pennsylvania State University System	444	1	277,681,411	230,875,878	46,805,533	17
28	University of North Carolina, Chapel Hill	440	1	343,477,234	130,518,897	212,958,337	62
29	University of Maryland System	432	1	411,673,312	278,673,907	132,999,405	32
30	New York University	430	1	190,351,046	66,893,119	123,457,927	65
31	University of Pittsburgh	415	1	441,873,571	159,758,761	282,114,810	64
32	Ohio State University, Columbus	410	1	215,595,110	134,880,173	80,714,937	37
33	Rutgers University, New Brunswick	406	0	134,042,623	134,042,623	0	0
34	Yale University	402	1	380,022,567	85,438,771	294,583,796	78
35	Purdue University	397	0	130,434,880	130,434,880	0	0

Table 3.4—Continued

Rank by No. of Patents Granted to University/College, 1981–2005	University/College (includes university systems)	No. of Patents Granted to University/College, 1981–2005	No. of Medical Schools at University/College	Federal R&D Funds Received by University/College in FY 2005, Including Medical School(s)	Federal R&D Funds Received by University/College in FY 2005, Excluding Medical School(s)	Federal R&D Funds in Going to Medical School(s) in FY 2005	Percent Medical School(s) Funds of Total Federal R&D Funds Received in FY 2005
36	Texas A&M University, College Station	391	0	133,311,836	133,311,836	0	0
37	Rockefeller University	379	0	82,523,825	82,523,825	0	0
38	Northwestern University	372	1	229,322,291	106,657,045	122,665,246	53
39	University of Southern California	367	1	314,070,232	181,927,298	132,142,934	42
40	University of Iowa	365	1	187,025,230	57,270,993	129,754,237	69
40	Princeton University	365	0	115,183,872	115,183,872	0	0
42	University of Kentucky	335	1	122,054,491	60,715,958	61,338,533	50
43	Virginia Polytechnic Institute	322	0	85,307,243	85,307,243	0	0
44	Louisiana State University System	314	2	138,821,888	85,095,111	53,726,777	39
45	Boston University	306	1	213,621,164	111,973,514	101,647,650	48
46	University of Nebraska System	305	1	106,135,253	72,330,324	33,804,929	32
47	Emory University	298	1	239,958,494	52,368,040	187,590,454	78
48	University of Rochester	282	1	252,596,225	120,228,000	132,368,225	52
49	University of Massachusetts System	278	1	201,965,327	86,313,247	115,652,080	57
50	Baylor College of Medicine	277	1	263,130,189	440,922	262,689,267	100

institution. Furthermore, a careful review of the individual patents granted in 2005 to the six universities and colleges, or university systems thereof, in the nation at which more than 70 percent of the federal R&D funds they received in FY 2005 went to their medical schools indicates that the vast majority of the patents that were issued to these institutions in 2005 were indeed related to biomedical technologies. Specifically, of the 150 patents issued to the six universities and colleges with more than 70 percent of the federal funding going to the medical school (i.e., Baylor College of Medicine, Washington University at St. Louis, Emory University, Yale University, Duke University, and University of Pennsylvania), more than 85 percent of the patents are for technologies in life and agricultural sciences, surgery, organic and inorganic chemistry, and chemical processing. Patents for technologies in life and agricultural sciences alone make up 60 percent of the total patents for these universities, including patents in the following classes of technology:

- Class 424 (including Class 514): Drug, bioaffecting, and body-treating compositions
- Class 435: Chemistry, molecular biology, and microbiology
- Class 800: Multicellular living organisms and unmodified parts thereof and related processes (USPTO, 2007).

These data are consistent with the findings of the USPTO, which reported that, in 2005, there were “disproportionately more patents assigned to U.S. academic institutions” in classes of technology in the areas of biotechnology, pharmaceuticals, and the chemistry of organic and inorganic compounds (USPTO, 2007).

In relation to the patenting practices specifically at the nation’s medical schools, the recent study by Azoulay, Michigan, and Sampat (2007) in the *New England Journal of Medicine* reported that the number of patents obtained by medical-school faculty rose dramatically between 1981 and 2000. The rise was seen in both absolute numbers and on a per capita basis. Approximately 5 percent of faculty members obtained a patent, but these were far more likely to be from basic science than from clinical departments (12.1 percent versus 3.5 percent, respectively). Persons with Ph.D.’s or M.D.-Ph.D.’s were significantly more likely to obtain a patent than those with M.D.’s alone. In addition, persons with NIH funding were more likely to obtain a patent than those without such funding.

Characteristics of Federal-Agency Research and Development Spending

One factor that likely influences the number of patented technologies generated by universities and colleges receiving federal R&D funds is the nature (i.e., stage) of the R&D that specific federal agencies, and parts thereof, want universities and colleges to conduct with the funds that they provide—that is, the funds that federal agencies provide to universities and colleges (and others) with which to conduct R&D are part of agency-wide R&D plans that are prepared as part of the annual budget request and are designed to fulfill both the general agency mission and meet the specific programmatic needs of particular federal agencies for both the present and the future. The entities that each federal agency entrust with conducting the R&D to implement their R&D plans vary considerably by the specific R&D needs, as well as the overall mission, of the agency. As shown in Table 4.1, the specific types of R&D work that federal agencies fund differs considerably from one agency to the next—with direct ramifications for what federally funded R&D is most likely to lead to patentable technologies.

For example, as noted in Table 4.1, which shows the FY 2005 R&D funding amounts for the six federal R&D agencies that controlled 95 percent of all federal R&D funds in FY 2005, 91 percent of the \$70+ billion that DoD spent on the conduct of R&D in FY 2005 were devoted to Development work, or

the systematic application of knowledge or understanding, directed toward the production of useful materials, devices, and systems or methods, including design, development, and improvement of prototypes and new processes to meet specific requirements. (OMB Circular A-11, Section 84)

Table 4.1
FY 2005 R&D Funds Spent by Federal Agencies, by Type of R&D Work (in thousands)

Funding Agency	Basic Research	Applied Research	Development	Total
DoD	1,484,562	4,805,657	63,825,733	70,115,952
HHS	15,751,268	12,931,108	87,400	28,769,776
NASA	2,386,268	1,965,245	3,493,412	7,844,925
DOE	2,866,961	2,899,287	1,847,328	7,613,576
NSF	3,410,676	332,188	0	3,742,864
USDA	828,631	1,119,129	153,185	2,100,945

SOURCE: OMB MAX Budget Database (FY 2005).

While it is conceivable that some of this R&D work would generate patentable technologies, the clear expectation is that Development would more likely be using patents that have already been issued by USPTO, rather than generating new ones.

Almost 7 percent of the funds that DoD spent on the conduct of R&D in FY 2005 were devoted to Applied Research, or

systematic study to gain knowledge or understanding necessary to determine the means by which a recognized and specific need may be met. (OMB Circular A-11, Section 84)

Applied Research is clearly the R&D work that is most likely to generate patentable technologies for universities and colleges or any other entity conducting this R&D.

Only 2 percent of the funds that DoD spent on the conduct of R&D in FY 2005 were spent on Basic Research, or

systematic study directed toward fuller knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications towards processes or products in mind. (OMB Circular A-11, Section 84)

This R&D work clearly does not envision that it will generate many patentable technologies, and yet Basic Research is the type of R&D that DoD very pointedly expects to be conducted by universities and colleges. Indeed, with one very minor exception, all of the R&D funds that DoD expressly devoted to support R&D at universities and colleges in FY 2005 were for the conduct of Basic Research.

The pattern is similar for NASA, in that the overall R&D emphasis of the agency is clearly on Development but the R&D funds that NASA specifically devotes to universities and colleges are divided between Development and Basic Research, to the exclusion of Applied Research. Hence, one would not expect the R&D that universities and colleges conduct with NASA-provided funds to generate many patentable technologies.

As an agency, DOE placed virtually equal emphasis on Basic Research and Applied Research in its overall R&D activities in FY 2005, devoting 38 percent of all the funds that it spent on the conduct of R&D to each. Almost 75 percent of the funds that DOE devoted to Applied Research in FY 2005, however, were spent on weapon activities—R&D work that was generally classified—so one would not anticipate that this R&D would generate many patents, as patents are public disclosures. And, similar to DoD, 75 percent of all the R&D funds that DOE provided to universities and colleges in FY 2005 were for the conduct of Basic Research. So again, it appears that the R&D that universities and colleges conducted with DOE-provided funds would not likely generate many patentable technologies.

While 85 percent of all the R&D funds spent by NSF in FY 2005 went to universities and colleges, around 90 percent of them were devoted to the conduct of Basic Research. The remainder was devoted to Applied Research, however, so they could have generated some patentable technologies. Regardless, the fact that the vast majority of NSF's R&D funds go to universities and colleges is not surprising, as it is in keeping with the central mission of the agency.

USDA alone, among the six major federal R&D agencies, spent the majority (i.e., 53 percent) of its R&D funds on the conduct of Applied Research in FY 2005. At least 58 percent of these Applied Research funds, however, were spent at in-house federal research facilities rather

than provided to nonfederal entities, such as universities and colleges. Nevertheless, a notable amount of USDA's Applied Research funds were provided to universities and colleges and, therefore, available to possibly generate patentable technologies.

Consequently, as Table 4.1 shows, by far the most likely source of the federal Applied Research funds that would likely lead to patents is HHS. As the home of NIH, more than 95 percent of HHS's total R&D funds are controlled by NIH, and more than 40 percent of NIH's R&D funds were spent on Applied Research in FY 2005. Or, viewed another way, in FY 2005, NIH *alone* funded more Applied Research than did DoD, NASA, DOE, NSF, and USDA *combined*. Hence, while it is premature to claim a causal relationship between the R&D funding provided by the federal government and the patents filed by the nation's universities and colleges, it is hard to deny that there is indeed a connection between the type of patents obtained by universities and colleges described in Chapter Three and the type of R&D funding provided to universities and colleges by the federal government described in this chapter.

Conclusions

This report is an offshoot of *Vital Assets* (Fossum, Painter, Eiseman, et al., 2004), a report in which the R&D funding patterns of the federal government vis-à-vis universities and colleges were tracked between FY 1996 and FY 2002. *Vital Assets* found that while the amount of federal R&D funds going to all performers increased during these years, the increase in federal R&D funds going to universities and colleges was more than double that of the overall increase in R&D funds. This finding raised the basic question that is indirectly addressed in this report—namely, what is the true nature of the relationship between the provision of funds to universities and colleges by the federal government for the conduct of R&D and scientific and technological innovation by universities and colleges? Specifically, does receiving more federal R&D funds “buy” more innovation from universities and colleges?

In this report, we describe and provide a rich set of data extracted from RaDiUS that we hope will spark further inquiry into identifying the true relationship between the federal R&D funding going to universities and colleges on the one hand and the innovation occurring at these institutions on the other. Our exploratory analysis, albeit far from ideal, based on federal R&D funding data for FY 2005 only and the aggregate number of patents granted to each university or college between the passage of the Bayh-Dole Act and 2005, suggests that there is indeed an association between these two factors and that further analysis of this nature would likely advance the ability of decisionmakers to make more-effective choices regarding the use of federal R&D funds. Specifically, we found that there appears to be a strong association between the amount, as well as the type (i.e., Applied Research), of federal R&D funds that a university or college receives and the number of patents that are generated by the same university or college. The association between the amount and type of federal funds received for R&D and the number of patents granted to universities and colleges was especially notable in the biomedical sciences. Specifically, universities with medical schools received substantially more patents than those without medical schools. And the average medical school considered separately from its parent university received more federal R&D funds in FY 2005 than did the average university or college, most of which do not have medical schools, by a considerable margin.

When *Vital Assets* found that “two-thirds of the federal funds going to universities and colleges for the conduct of R&D focus on only one field of science—life science” in FY 2002, the concentration of federal R&D funds was so marked that the following questions were specifically posed in the conclusion of *Vital Assets*:

“Are biomedical and health care issues so clearly at the top of the nation’s agenda that they merit two-thirds of all federal funds provided to universities and colleges for the conduct of R&D? and

“Are other critical national needs that have substantial R&D components (such as environment, energy, homeland security, and education) getting the attention they require?” (Fossum, Painter, Eiseman, et al., 2004, p. 41)

This report indicates that little has changed since the release of *Vital Assets*. Specifically, it shows that in FY 2005, two-thirds of all R&D funds provided to universities and colleges were devoted to addressing biomedical and health-care issues. In light of this, the two questions noted above remain as relevant today as when they were first posed in *Vital Assets*. Clearly, these are questions that can be informed by additional research and analysis. If such research and analysis confirms that there is indeed a causal connection between the amount of federal funds provided to universities and colleges for the conduct of Applied Research and the generation of patentable technologies by these institutions, at least some of which are hopefully usable and a few of which could be revolutionary, consideration should definitely be given by federal decisionmakers to providing funds to universities and colleges to conduct Applied Research on the many challenges that we face in fields other than biomedical science and health care.

Description of the Data Used

Federal Research and Development Funding Data

To conduct the analysis presented in this report, RaDiUS was tapped in the summer of 2007 to create a special set of data that identified the obligations that federal agencies made to U.S. colleges and universities to support R&D activities. After the analysis was completed, the federal government released the information for FY 2006 and updated some of the records for previous fiscal years. All of this information was promptly loaded into RaDiUS. Because the decision to release the two sets of data detailing the federal R&D funds going to specific universities and colleges by fiscal year was made after the information was updated in RaDiUS, the data contained in these outputs are based on the underlying data that reflect the updated information. Consequently, a comparison of the funding data presented in these detailed data outputs and those presented in the tables in this analysis will reveal a slight difference for many universities and colleges. In only one instance were these differences large enough to change the ranking of the university or college in any notable way. Specifically, due to the subsequent deobligation of several awards originally made in FY 2005, the updated information for FY 2005 returned the University of Nevada at Reno to the non-top-100 position that it had occupied prior to FY 2005.

During its tenure, RaDiUS systematically tracked all federal R&D funds for FY 1993 to FY 2006, from their point of planning and allocation at the White House and top agency levels, through the various levels of bureaucracy in each agency, to the point at which the R&D funds were finally transferred as tasks to researchers in federal laboratories and as grants, cooperative agreements, or contracts to the researchers in nonfederal entities that would actually conduct the R&D.¹ Because the data in RaDiUS came from the official government-wide federal-spending data systems, the information in RaDiUS on the federal R&D funds going to universities and colleges, as well as other entities, was complete and accurate.

In 1998, the U.S. General Accounting Office (GAO, 1998a) (now the U.S. Government Accountability Office) declared RaDiUS a “Best Practice” of the U.S. government, and RaDiUS was used as the basis of numerous studies and analyses—most notably, *Discovery and Innovation: Federal Research and Development Activities in the Fifty States, District of Columbia, and Puerto Rico* (Fossum, Painter, Williams, et al., 2000), and *Vital Assets: Federal Investment in Research and Development at the Nation’s Universities and Colleges* (Fossum, Painter, Eiseman, et al., 2004). From March 2003 to March 2008, the Office of Management and Budget (OMB)

¹ For FY 2005, this meant that RaDiUS tracked the \$126,197,737,000 of federal funds devoted to conducting R&D, from the bureaucratic rungs of the 22 federal agencies that oversaw the planning, through to the transfer of these funds to the individual researchers who actually spent these funds to conduct R&D via 211,013 awards and tasks.

(2004a, 2005, 2006, 2007, 2008a) officially reported to Congress that it supported RaDiUS because RaDiUS was helping to implement the E-Government Act (Pub. L. 107-347). Section 207(g) of the E-Government Act requires that OMB ensure that an integrated repository of detailed information on all federally funded R&D is maintained and is searchable from the Internet. Even though RaDiUS was the only data system that fulfilled the requirements of Section 207(g) of the E-Government Act, OMB ended its support for RaDiUS in April 2008, and RaDiUS was shut down shortly thereafter.

Prior to the creation of RaDiUS in the 1990s to support the activities of the Office of Science and Technology Policy in the White House, the only source of information on the federal R&D funds going to the nation's academic institutions was NSF's (2009) "Survey of Research and Development Expenditures at Universities and Colleges." While the data generated by NSF's annual survey have been used in several analyses of university patenting (Coupé, 2003; Foltz, Kim, and Barham, 2003), their use has numerous drawbacks due to the inherent difficulty of verifying the consistency and accuracy of self-reported data.²

The funding data provided in the two sets of data created for this report are based on the amount of funds that were obligated by the federal government to each university and college in the fiscal year specified—i.e., the total dollars that the federal government has agreed in a specific fiscal year to provide to a university or college to cover the costs of R&D work that will be performed by the university or college in that fiscal year *or* in some future fiscal year. Because the federal government records all of its transactions that result in monetary awards to third parties (e.g., universities and colleges) exclusively as obligations, this was the only unit of measure available for our analysis. Please note that obligations are not the same as outlays or expenditures, the latter of which involve the disbursement of funds for use in the current fiscal year only, as opposed to some future fiscal year as well. This distinction is important because an obligation of funds by the federal government to a university or college for an extraordinarily large R&D project can have a notable effect on the total amount of federal R&D funds credited to a single institution in a given fiscal year. Such awards are not common, however, so the amount of federal R&D funds going to specific universities and colleges customarily trends quite evenly from one fiscal year to the next.³

None of the funds received by universities to manage and operate FFRDCs have been included in the data used in this report, because none of these centers is actually part of the universities that manage and operate them. That is, to avoid any conflict of interest, all of these centers are government-owned, contractor-operated facilities (GOCOs), and the entities that

² What federal R&D funding gets reported to NSF in these surveys is determined largely by the contents of agreements that have been negotiated between each academic institution and the various federal agencies based on the cost accounting principles set forth in OMB Circular A-21 (NSF Form 411, 2007b, p. 1)—agreements that, by their very nature, allow similar costs to be treated somewhat differently from one academic setting to another (OMB Circular A-21, Section A.2.f). And, as NSF notes, the only way to verify the accuracy of self-reported data is to check them against self-reported data that have been previously provided by the same institution and ask that institution to explain any discrepancies (NSF Report 07-318, 2005a, p. 469). In short, there is no good way to verify the accuracy of self-reported data.

³ In FY 2005, however, Tufts University received \$142 million under a cooperative agreement from the Agricultural Research Service within USDA for the operation and management of the Human Nutrition Research Center on Aging, which lifted it from 99th place in FY 2002 to 30th place in FY 2005, among the 100 universities and colleges receiving the most federal R&D funds. Similarly, in FY 2005, the California Institute of Technology received \$32 million under a cooperative agreement from NSF for the operation and management of LIGO, which lifted it from 93rd place in FY 2002 to 54th place in FY 2005 among the 100 universities and colleges receiving the most federal R&D funds.

manage and operate the centers are required to be autonomous organizations that are separate from the core academic and research programs of the university (FAR 35.017[a][3]).

The data do include the federal R&D funds that went to five specific research institutes that *are* actual divisions or teaching affiliates of universities: the Applied Physics Laboratory at Johns Hopkins University, the Southern Research Institute at the University of Alabama at Birmingham, the Whitehead Institute for Biomedical Research and the Woods Hole Oceanographic Institution at the Massachusetts Institute of Technology, and the Yale Southern Observatory at Yale University. These five research institutes are readily distinguishable from FFRDCs that are managed and operated by universities in that these research institutes are integral parts of the core academic and research programs of the universities (i.e., they share research facilities, faculty, and staff); hence, the federal R&D funds each research institute received was credited to the university with which it is affiliated.

Federal Research and Development Funding for Fiscal Year 2005

Table B.1
The 100 Schools Receiving the Most FY 2005 Federal R&D Funds, Including Medical-School Funding

Rank	University or College	FY 2005 Total (\$)
1	Johns Hopkins University	1,155,609,430
2	University of Washington	628,139,276
3	University of Pennsylvania	549,117,228
4	University of Michigan Ann Arbor	517,250,528
5	University of California—Los Angeles	507,467,336
6	Stanford University	481,181,883
7	Massachusetts Institute of Technology	479,423,914
8	University of California—San Diego	473,182,259
9	University of Wisconsin Madison	465,274,597
10	University of California—San Francisco	451,693,531
11	Duke University	444,327,434
12	University of Pittsburgh	441,873,571
13	Columbia University	438,684,985
14	Washington University	420,227,382
15	Harvard University	399,417,957
16	Yale University	380,022,567
17	Cornell University	345,330,015
18	University of North Carolina at Chapel Hill	343,477,234
19	University of Minnesota—Twin Cities	339,956,498
20	University of Southern California	314,070,232
21	Case Western Reserve University	297,608,251
22	Vanderbilt University	295,708,474
23	University of Alabama at Birmingham	290,651,163
24	University of California—Berkeley	269,866,086

Table B.1—Continued

Rank	University or College	FY 2005 Total (\$)
25	University of Chicago	264,128,670
26	Baylor College of Medicine	263,130,189
27	University of Rochester	252,596,225
28	Emory University	239,958,494
29	University of California—Davis	234,162,945
30	Tufts University	232,876,514
31	Pennsylvania State University—University Park	230,875,878
32	Northwestern University Evanston	229,322,291
33	University of Illinois Urbana-Champaign	220,544,098
34	Ohio State University—Columbus	215,595,110
35	Boston University	213,621,164
36	University of Arizona	206,739,998
37	University of Florida	206,710,710
38	University of Texas—Austin	201,335,486
39	Oregon Health and Science University	192,104,104
40	University of Maryland—Baltimore	191,012,200
41	University of Virginia	190,670,573
42	New York University	190,351,046
43	Mount Sinai School of Medicine	188,722,487
44	University of Colorado Health Sciences Center	188,027,474
45	University of Iowa	187,025,230
46	University of Hawaii at Manoa	186,070,738
47	Mayo Medical School	180,730,843
48	University of Texas Southwestern Medical Center Dallas	180,550,608
49	University of Illinois Chicago	171,331,435
50	University of California—Irvine	170,440,930
51	University of Texas MD Anderson Cancer Center	164,159,571
52	Yeshiva University	160,899,649
53	University of Utah	160,161,156
54	California Institute of Technology	154,117,521
55	University of Colorado Boulder	152,954,539
56	University of Maryland—College Park	149,814,426
57	Georgia Institute of Technology	138,030,467

Table B.1—Continued

Rank	University or College	FY 2005 Total (\$)
58	University of Miami	135,253,036
59	Rutgers, the State University of New Jersey—New Brunswick	134,042,623
60	Texas A&M University	133,311,836
61	University of Medicine and Dentistry of New Jersey	131,391,776
62	Purdue University	130,434,880
63	Wake Forest University	129,919,994
64	Colorado State University—Fort Collins	127,780,880
65	University of Cincinnati	123,850,451
66	Michigan State University	123,413,908
67	University of Kentucky	122,054,491
68	University of Massachusetts Medical School	119,232,276
69	University of Connecticut—Storrs	118,344,483
70	University of Texas Medical Branch Galveston	118,205,731
71	Princeton University	115,183,872
72	University of Texas Health Science Center Houston	108,176,787
73	Dartmouth College	107,049,852
74	Wayne State University	106,619,233
75	Indiana University—Purdue University at Indianapolis	102,734,563
76	University of California—Santa Barbara	101,676,071
77	University of New Mexico—Albuquerque	99,664,933
78	State University of New York—Stony Brook	98,484,770
79	Carnegie Mellon University	98,047,172
80	University of Missouri—Columbia	97,733,374
81	Illinois Institute of Technology	95,249,954
82	University of Louisville	92,093,174
83	University of Georgia—Athens	91,733,976
84	Georgetown University	91,406,663
85	Medical University of South Carolina	89,474,940
86	Iowa State University	88,762,215
87	Virginia Polytechnic Institute	85,307,243
88	Oregon State University	85,090,046
89	Tulane University	85,045,786
90	Virginia Commonwealth University	84,842,848

Table B.1—Continued

Rank	University or College	FY 2005 Total (\$)
91	Medical College of Wisconsin	83,167,179
92	University of Nevada Reno	83,006,849
93	Louisiana State University—Baton Rouge	82,579,936
94	Rockefeller University	82,523,825
95	University of Texas Health Science Center San Antonio	82,019,724
96	Arizona State University	81,461,760
97	Brown University	81,358,802
98	University of Vermont	81,119,943
99	North Carolina State University	81,033,194
100	State University of New York—Buffalo	80,062,350

Table B.2
The 100 Schools Receiving the Most FY 2005 Federal R&D Funds, Excluding Medical-School Funding

Rank	University or College	FY 2005 Total (\$)
1	Johns Hopkins University	743,000,644
2	Massachusetts Institute of Technology	479,423,914
3	University of Wisconsin Madison	337,832,047
4	University of Washington	337,256,200
5	University of California—Berkeley	269,866,086
6	University of Michigan Ann Arbor	259,466,907
7	University of California—San Diego	242,670,376
8	Pennsylvania State University—University Park	230,875,878
9	Cornell University	222,108,892
10	University of Illinois Urbana-Champaign	220,544,098
11	Stanford University	218,817,568
12	University of California—Los Angeles	210,671,659
13	University of Minnesota—Twin Cities	204,985,650
14	Harvard University	202,851,603
15	University of Texas—Austin	201,335,486
16	Columbia University	199,965,591
17	Tufts University	187,308,976
18	University of Southern California	181,927,298
19	University of Hawaii at Manoa	166,060,302
20	University of Texas MD Anderson Cancer Center	164,159,571
21	University of Pittsburgh	159,758,761
22	University of Pennsylvania	157,328,704
23	California Institute of Technology	154,117,521
24	University of Colorado Boulder	152,954,539
25	University of Maryland—College Park	149,814,426
26	University of California—Davis	148,714,737
27	Georgia Institute of Technology	138,030,467
28	University of Arizona	135,552,259
29	Ohio State University—Columbus	134,880,173
30	Rutgers, the State University of New Jersey—New Brunswick	134,042,623
31	Texas A&M University	133,311,836

Table B.2—Continued

Rank	University or College	FY 2005 Total (\$)
32	University of North Carolina at Chapel Hill	130,518,897
33	Purdue University	130,434,880
34	Colorado State University—Fort Collins	127,780,880
35	University of Florida	125,561,724
36	University of Rochester	120,228,000
37	University of Alabama at Birmingham	117,713,363
38	Duke University	115,879,714
39	Princeton University	115,183,872
40	Boston University	111,973,514
41	Michigan State University	109,646,678
42	Northwestern University Evanston	106,657,045
43	University of California—Santa Barbara	101,676,071
44	Carnegie Mellon University	98,047,172
45	University of Chicago	95,606,944
46	Illinois Institute of Technology	95,249,954
47	University of Illinois Chicago	93,226,032
48	University of California—San Francisco	93,194,073
49	University of Georgia—Athens	91,733,976
50	University of California—Irvine	90,082,022
51	Iowa State University	88,762,215
52	Yale University	85,438,771
53	Virginia Polytechnic Institute	85,307,243
54	Oregon State University	85,090,046
55	Louisiana State University—Baton Rouge	82,579,936
56	Rockefeller University	82,523,825
57	University of Missouri—Columbia	82,184,849
58	Arizona State University	81,461,760
59	North Carolina State University	81,033,194
60	University of Utah	77,348,410
61	Indiana University Bloomington	76,945,710
62	Mississippi State University	76,911,360
63	New Mexico State University—Las Cruces	74,529,113
64	University of Alaska Fairbanks	72,582,178

Table B.2—Continued

Rank	University or College	FY 2005 Total (\$)
65	University of Nevada Reno	69,290,805
66	New York University	66,893,119
67	University of Delaware	64,595,231
68	University of California—Santa Cruz	63,882,393
69	Case Western Reserve University	62,655,231
70	University of New Mexico—Albuquerque	61,924,181
71	University of Kentucky	60,715,958
72	Washington State University	60,295,979
73	University of Massachusetts Amherst	60,049,575
74	George Mason University	59,121,493
75	University of Maryland—Baltimore	58,012,795
76	University of Iowa	57,270,993
77	University of Virginia	56,644,293
78	University of Nebraska—Lincoln	56,535,969
79	University of California—Riverside	55,914,906
80	Florida State University	55,774,364
81	Vanderbilt University	55,004,710
82	University of Kansas—Lawrence	54,578,397
83	State University of New York—Buffalo	53,460,386
84	University of New Hampshire Durham	53,391,154
85	University of Miami	52,919,375
86	University of Connecticut—Storrs	52,477,998
87	Emory University	52,368,040
88	Montana State University—Bozeman	51,840,031
89	University of Notre Dame	51,186,454
90	Wayne State University	50,557,180
91	University of South Carolina at Columbia	50,177,371
92	George Washington University	49,943,581
93	University of Louisville	48,474,998
94	Washington University	48,408,922
95	University of Tennessee—Knoxville	46,046,292
96	University of Oregon	44,687,478
97	State University of New York—Stony Brook	44,496,514

Table B.2—Continued

Rank	University or College	FY 2005 Total (\$)
98	Utah State University	44,239,650
99	University of Mississippi	43,921,144
100	Florida International University	41,779,657

Table B.3

The 100 Schools Receiving the Most FY 2005 Federal R&D Funds from the U.S. Department of Defense, the U.S. Department of Health and Human Services, the National Aeronautics and Space Administration, the U.S. Department of Energy, the National Science Foundation, and the U.S. Department of Agriculture, Including Medical-School Funding

Rank	University or College	Total	DoD	HHS	NASA	DOE	NSF	USDA
1	Johns Hopkins University	1,155,609,430	361,228,316	597,346,205	146,727,514	3,906,232	26,467,585	10,588,668
2	University of Washington	628,139,276	39,970,226	459,202,741	7,623,792	17,014,988	71,044,845	2,206,134
3	University of Pennsylvania	549,117,228	30,461,122	471,760,000	2,028,708	9,143,362	25,456,363	699,134
4	University of Michigan Ann Arbor	517,250,528	24,232,259	390,639,792	9,368,149	14,332,374	66,839,575	889,661
5	University of California— Los Angeles	507,467,336	34,342,023	388,645,311	8,379,406	3,539,507	63,858,927	887,020
6	Stanford University	481,181,883	37,223,880	309,548,555	62,586,666	19,257,112	49,945,802	0
7	Massachusetts Institute of Technology	479,423,914	58,079,508	194,168,565	47,890,704	63,171,606	94,914,984	910,000
8	University of California— San Diego	473,182,259	31,222,799	310,935,422	6,820,764	12,876,889	90,161,413	636,000
9	University of Wisconsin Madison	465,274,597	14,074,829	275,557,907	8,462,717	27,075,330	102,159,098	19,072,258
10	University of California— San Francisco	451,693,531	9,229,185	436,416,016	1,519,266	1,160,318	1,245,977	330,000
11	Duke University	444,327,434	16,803,746	389,124,447	1,982,237	7,561,563	24,633,711	657,940
12	University of Pittsburgh	441,873,571	26,613,929	388,835,522	1,122,457	3,445,718	16,772,309	886,212
13	Columbia University	438,684,985	19,771,448	323,021,102	9,594,276	13,716,564	55,555,673	0
14	Washington University	420,227,382	2,435,547	395,743,845	5,265,850	3,954,716	12,023,367	425,069
15	Harvard University	399,417,957	19,436,117	328,281,499	3,196,138	10,486,063	30,741,268	189,200
16	Yale University	380,022,567	3,732,321	338,296,923	1,503,696	9,239,775	25,773,481	300,781
17	Cornell University	345,330,015	8,393,554	194,057,622	3,330,624	8,967,814	92,732,298	32,854,170

Table B.3—Continued

Rank	University or College	Total	DoD	HHS	NASA	DOE	NSF	USDA
18	University of North Carolina at Chapel Hill	343,477,234	5,874,759	303,423,177	1,885,250	3,676,918	22,534,821	789,184
19	University of Minnesota—Twin Cities	339,956,498	18,745,037	232,956,862	4,310,825	6,931,947	43,831,588	17,900,996
20	University of Southern California	314,070,232	67,587,263	182,574,959	3,162,266	6,321,466	45,611,907	110,000
21	Case Western Reserve University	297,608,251	3,119,430	281,610,021	4,417,697	910,987	7,385,103	0
22	Vanderbilt University	295,708,474	7,976,873	265,185,886	701,350	1,910,533	15,070,262	165,000
23	University of Alabama at Birmingham	290,651,163	11,232,877	261,272,787	10,140,043	948,789	3,480,262	0
24	University of California—Berkeley	269,866,086	17,068,703	100,558,200	55,057,425	7,272,116	66,420,027	12,243,131
25	University of Chicago	264,128,670	1,998,939	201,665,096	1,274,270	4,762,068	45,668,001	380,000
26	Baylor College of Medicine	263,130,189	1,115,103	252,240,137	672,739	-886	2,210,974	6,592,122
27	University of Rochester	252,596,225	5,806,609	160,993,956	387,646	76,397,791	6,620,653	0
28	Emory University	239,958,494	1,522,789	233,040,010	105,549	709,936	3,066,634	0
29	University of California—Davis	234,162,945	3,808,820	143,951,218	3,230,262	7,665,121	40,500,509	31,729,857
30	Tufts University	232,876,514	1,394,320	83,696,981	231,000	1,183,000	2,924,452	143,366,882
31	Pennsylvania State University—University Park	230,875,878	92,779,033	40,826,970	9,420,291	17,263,524	46,344,874	18,482,978
32	Northwestern University Evanston	229,322,291	14,210,397	170,709,612	4,031,210	7,009,751	28,200,601	0
33	University of Illinois Urbana-Champaign	220,544,098	23,066,660	58,177,650	4,732,727	18,106,030	89,894,514	20,485,146

Table B.3—Continued

Rank	University or College	Total	DoD	HHS	NASA	DOE	NSF	USDA
34	Ohio State University— Columbus	215,595,110	11,222,548	122,457,871	8,077,063	9,358,316	38,605,277	18,482,512
35	Boston University	213,621,164	9,069,988	154,790,077	6,444,787	4,216,202	35,562,089	0
36	University of Arizona	206,739,998	7,482,299	109,686,584	36,341,466	3,914,517	34,241,634	9,772,293
37	University of Florida	206,710,710	10,700,994	125,767,611	8,727,399	7,429,280	31,811,404	15,823,040
38	University of Texas—Austin	201,335,486	84,171,633	49,875,248	8,512,692	19,148,893	37,405,660	26,000
39	Oregon Health and Science University	192,104,104	5,231,559	178,786,508	0	1,984,000	2,280,402	350,000
40	University of Maryland— Baltimore	191,012,200	4,415,317	182,253,889	2,963,198	285,878	244,494	275,000
41	University of Virginia	190,670,573	8,683,861	152,551,326	1,539,209	4,216,389	19,174,842	0
42	New York University	190,351,046	7,480,067	153,315,466	662,665	2,713,091	21,027,576	0
43	Mount Sinai School of Medicine	188,722,487	8,840,969	175,698,123	634,121	0	160,000	0
44	University of Colorado Health Sciences Center	188,027,474	90,000	186,796,910	-157	0	969,991	0
45	University of Iowa	187,025,230	6,400,936	166,049,814	2,888,664	1,342,687	9,044,684	10,850
46	University of Hawaii at Manoa	186,070,738	46,003,742	71,772,660	9,544,850	3,056,182	17,079,966	10,238,756
47	Mayo Medical School	180,730,843	9,109,900	171,193,261	0	0	62,689	0
48	University of Texas Southwestern Medical Center Dallas	180,550,608	3,857,657	170,894,011	1,586,379	2,916,000	631,561	0
49	University of Illinois Chicago	171,331,435	6,664,139	138,953,511	574,806	2,914,386	13,916,592	0
50	University of California— Irvine	170,440,930	2,222,004	126,651,309	3,594,474	8,052,729	29,527,329	0

Table B.3—Continued

Rank	University or College	Total	DoD	HHS	NASA	DOE	NSF	USDA
51	University of Texas MD Anderson Cancer Center	164,159,571	9,647,640	153,626,025	356,823	0	529,083	0
52	Yeshiva University	160,899,649	3,094,137	157,295,547	0	431,632	78,333	0
53	University of Utah	160,161,156	3,800,598	127,322,059	847,207	7,317,184	19,302,963	87,094
54	California Institute of Technology	154,117,521	14,093,500	46,343,469	12,052,816	15,637,871	64,616,365	0
55	University of Colorado Boulder	152,954,539	12,708,461	42,386,963	28,436,834	7,240,305	36,457,624	0
56	University of Maryland—College Park	149,814,426	20,972,694	24,304,521	27,868,880	8,713,769	35,579,323	20,212,204
57	Georgia Institute of Technology	138,030,467	54,884,329	17,866,697	12,704,623	7,686,773	39,010,388	179,413
58	University of Miami	135,253,036	10,265,556	96,973,050	2,941,188	425,931	11,211,173	0
59	Rutgers, the State University of New Jersey—New Brunswick	134,042,623	5,584,109	64,186,411	1,990,133	4,116,386	39,051,672	11,381,019
60	Texas A&M University	133,311,836	10,518,993	38,889,374	11,647,179	10,956,775	27,544,207	24,361,322
61	University of Medicine and Dentistry of New Jersey	131,391,776	2,193,359	123,568,526	197,845	149,829	659,253	0
62	Purdue University	130,434,880	11,523,795	41,193,889	7,078,313	8,315,256	38,845,031	20,121,484
63	Wake Forest University	129,919,994	2,703,582	124,828,775	172,200	51,334	2,004,297	0
64	Colorado State University—Fort Collins	127,780,880	6,718,909	54,422,461	10,430,068	5,644,366	22,916,553	16,901,037
65	University of Cincinnati	123,850,451	4,376,282	107,849,139	165,994	1,016,988	6,143,776	380,000
66	Michigan State University	123,413,908	4,088,206	42,750,982	2,294,937	11,395,257	29,690,816	28,207,809
67	University of Kentucky	122,054,491	1,489,500	86,346,080	1,369,802	4,966,978	9,424,162	14,297,993

Table B.3—Continued

Rank	University or College	Total	DoD	HHS	NASA	DOE	NSF	USDA
68	University of Massachusetts Medical School	119,232,276	686,250	117,593,950	0	371,061	581,015	0
69	University of Connecticut—Storrs	118,344,483	8,509,416	77,178,961	1,031,927	2,101,565	11,051,149	11,361,867
70	University of Texas Medical Branch Galveston	118,205,731	861,065	114,717,149	871,710	183,015	502,106	475,000
71	Princeton University	115,183,872	14,241,840	37,477,278	8,202,436	7,209,638	42,205,010	0
72	University of Texas Health Science Center Houston	108,176,787	18,509,307	85,476,783	1,840,527	1,185,000	956,945	0
73	Dartmouth College	107,049,852	1,599,289	91,312,059	707,600	200,000	12,769,471	0
74	Wayne State University	106,619,233	10,146,045	88,648,506	1,145,813	992,000	5,007,136	0
75	Indiana University—Purdue University at Indianapolis	102,734,563	2,659,578	99,352,102	702,283	20,600	0	0
76	University of California—Santa Barbara	101,676,071	26,012,963	14,921,231	4,887,699	7,359,879	42,642,578	1,007,825
77	University of New Mexico—Albuquerque	99,664,933	9,102,371	67,293,169	3,641,575	3,600,975	15,512,217	76,555
78	State University of New York—Stony Brook	98,484,770	2,444,016	64,969,722	1,206,360	2,744,194	23,906,428	300,000
79	Carnegie Mellon University	98,047,172	23,320,865	16,516,716	3,653,189	5,902,533	45,572,485	0
80	University of Missouri—Columbia	97,733,374	2,912,381	38,846,611	1,045,738	3,806,049	13,928,606	34,251,768
81	Illinois Institute of Technology	95,249,954	79,498,019	11,117,198	298,445	548,521	3,787,771	0
82	University of Louisville	92,093,174	6,330,262	75,099,435	2,291,634	4,009,338	4,362,505	0
83	University of Georgia—Athens	91,733,976	209,906	37,934,187	614,270	14,306,602	17,602,586	17,755,160
84	Georgetown University	91,406,663	14,417,846	67,911,993	102,000	600,000	3,471,895	0

Table B.3—Continued

Rank	University or College	Total	DoD	HHS	NASA	DOE	NSF	USDA
85	Medical University of South Carolina	89,474,940	0	85,364,195	558,003	1,500,000	1,088,932	620,498
86	Iowa State University	88,762,215	4,371,463	21,263,170	1,764,325	3,005,233	24,417,981	32,918,043
87	Virginia Polytechnic Institute	85,307,243	20,907,131	15,999,559	925,019	5,592,870	22,627,751	17,151,629
88	Oregon State University	85,090,046	7,788,062	16,026,410	3,820,707	6,014,744	23,790,450	15,492,338
89	Tulane University	85,045,786	1,807,507	74,590,136	1,727,524	2,135,722	3,577,361	580,802
90	Virginia Commonwealth University	84,842,848	3,989,902	72,907,872	2,104,528	1,752,404	2,515,838	47,305
91	Medical College of Wisconsin	83,167,179	165,000	82,392,178	0	450,000	160,001	0
92	University of Nevada Reno	83,006,849	12,405,901	20,446,198	712,471	32,250,207	12,153,256	2,514,328
93	Louisiana State University—Baton Rouge	82,579,936	6,575,994	29,188,596	1,849,589	5,773,761	12,873,578	20,809,791
94	Rockefeller University	82,523,825	225,654	80,555,337	0	973,732	769,102	0
95	University of Texas Health Science Center San Antonio	82,019,724	1,375,919	79,711,058	264,508	289,530	378,709	0
96	Arizona State University	81,461,760	11,418,056	32,669,652	2,892,615	1,911,917	29,512,341	251,264
97	Brown University	81,358,802	7,123,381	52,808,578	3,040,382	3,663,578	14,025,750	0
98	University of Vermont	81,119,943	1,180,964	65,362,082	1,082,433	1,027,661	4,168,714	7,081,363
99	North Carolina State University	81,033,194	8,493,023	17,208,579	1,489,983	5,302,832	20,372,347	24,032,695
100	State University of New York—Buffalo	80,062,350	3,110,421	54,569,210	78,523	1,305,738	12,754,386	0

Table B.4

The 100 Schools Receiving the Most FY 2005 Federal R&D Funds from the U.S. Department of Defense, the U.S. Department of Health and Human Services, the National Aeronautics and Space Administration, the U.S. Department of Energy, the National Science Foundation, and the U.S. Department of Agriculture, Excluding Medical-School Funding

Rank	University or College	Total	DoD	HHS	NASA	DOE	NSF	USDA
1	Johns Hopkins University	743,000,644	361,228,316	184,737,419	146,727,514	3,906,232	26,467,585	10,588,668
2	Massachusetts Institute of Technology	479,423,914	58,079,508	194,168,565	47,890,704	63,171,606	94,914,984	910,000
3	University of Wisconsin Madison	337,832,047	14,074,829	148,115,357	8,462,717	27,075,330	102,159,098	19,072,258
4	University of Washington	337,256,200	39,970,226	168,319,665	7,623,792	17,014,988	71,044,845	2,206,134
5	University of California—Berkeley	269,866,086	17,068,703	100,558,200	55,057,425	7,272,116	66,420,027	12,243,131
6	University of Michigan Ann Arbor	259,466,907	24,232,259	132,856,171	9,368,149	14,332,374	66,839,575	889,661
7	University of California—San Diego	242,670,376	31,222,799	80,423,539	6,820,764	12,876,889	90,161,413	636,000
8	Pennsylvania State University—University Park	230,875,878	92,779,033	40,826,970	9,420,291	17,263,524	46,344,874	18,482,978
9	Cornell University	222,108,892	7,435,184	72,473,985	3,330,624	8,967,814	92,053,182	32,854,170
10	University of Illinois Urbana-Champaign	220,544,098	23,066,660	58,177,650	4,732,727	18,106,030	89,894,514	20,485,146
11	Stanford University	218,817,568	37,223,880	47,184,240	62,586,666	19,257,112	49,945,802	0
12	University of California—Los Angeles	210,671,659	34,342,023	92,148,445	8,080,595	3,539,507	63,858,927	887,020
13	University of Minnesota—Twin Cities	204,985,650	18,745,037	97,986,014	4,310,825	6,931,947	43,831,588	17,900,996
14	Harvard University	202,851,603	19,436,117	131,715,145	3,196,138	10,486,063	30,741,268	189,200
15	University of Texas—Austin	201,335,486	84,171,633	49,875,248	8,512,692	19,148,893	37,405,660	26,000

Table B.4—Continued

Rank	University or College	Total	DoD	HHS	NASA	DOE	NSF	USDA
16	Columbia University	199,965,591	19,771,448	84,545,520	9,594,276	13,716,564	55,555,673	0
17	Tufts University	187,308,976	1,394,320	38,129,443	231,000	1,183,000	2,924,452	143,366,882
18	University of Southern California	181,927,298	67,587,263	50,432,025	3,162,266	6,321,466	45,611,907	110,000
19	University of Hawaii at Manoa	166,060,302	46,003,742	51,762,224	9,544,850	3,056,182	17,079,966	10,238,756
20	University of Texas MD Anderson Cancer Center	164,159,571	9,647,640	153,626,025	356,823	0	529,083	0
21	University of Pittsburgh	159,758,761	16,598,374	116,736,267	1,122,457	3,445,718	16,772,309	886,212
22	University of Pennsylvania	157,328,704	30,461,122	79,971,476	2,028,708	9,143,362	25,456,363	699,134
23	California Institute of Technology	154,117,521	14,093,500	46,343,469	12,052,816	15,637,871	64,616,365	0
24	University of Colorado Boulder	152,954,539	12,708,461	42,386,963	28,436,834	7,240,305	36,457,624	0
25	University of Maryland—College Park	149,814,426	20,972,694	24,304,521	27,868,880	8,713,769	35,579,323	20,212,204
26	University of California—Davis	148,714,737	3,808,820	58,503,010	3,230,262	7,665,121	40,500,509	31,729,857
27	Georgia Institute of Technology	138,030,467	54,884,329	17,866,697	12,704,623	7,686,773	39,010,388	179,413
28	University of Arizona	135,552,259	7,482,299	38,498,845	36,341,466	3,914,517	34,241,634	9,772,293
29	Ohio State University—Columbus	134,880,173	11,222,548	41,742,934	8,077,063	9,358,316	38,605,277	18,482,512
30	Rutgers, the State University of New Jersey—New Brunswick	134,042,623	5,584,109	64,186,411	1,990,133	4,116,386	39,051,672	11,381,019
31	Texas A&M University	133,311,836	10,518,993	38,889,374	11,647,179	10,956,775	27,544,207	24,361,322

Table B.4—Continued

Rank	University or College	Total	DoD	HHS	NASA	DOE	NSF	USDA
32	University of North Carolina at Chapel Hill	130,518,897	5,874,759	90,464,840	1,885,250	3,676,918	22,534,821	789,184
33	Purdue University	130,434,880	11,523,795	41,193,889	7,078,313	8,315,256	38,845,031	20,121,484
34	Colorado State University—Fort Collins	127,780,880	6,718,909	54,422,461	10,430,068	5,644,366	22,916,553	16,901,037
35	University of Florida	125,561,724	10,700,994	44,618,625	8,727,399	7,429,280	31,811,404	15,823,040
36	University of Rochester	120,228,000	5,806,609	28,625,731	387,646	76,397,791	6,620,653	0
37	University of Alabama at Birmingham	117,713,363	11,232,877	88,738,249	10,140,043	948,789	3,480,262	0
38	Duke University	115,879,714	16,803,746	60,676,727	1,982,237	7,561,563	24,633,711	657,940
39	Princeton University	115,183,872	14,241,840	37,477,278	8,202,436	7,209,638	42,205,010	0
40	Boston University	111,973,514	9,069,988	53,142,427	6,444,787	4,216,202	35,562,089	0
41	Michigan State University	109,646,678	4,088,206	28,983,752	2,294,937	11,395,257	29,690,816	28,207,809
42	Northwestern University Evanston	106,657,045	14,080,397	48,242,366	4,031,210	7,009,751	28,132,601	0
43	University of California—Santa Barbara	101,676,071	26,012,963	14,921,231	4,887,699	7,359,879	42,642,578	1,007,825
44	Carnegie Mellon University	98,047,172	23,320,865	16,516,716	3,653,189	5,902,533	45,572,485	0
45	University of Chicago	95,606,944	1,998,939	33,143,370	1,274,270	4,762,068	45,668,001	380,000
46	Illinois Institute of Technology	95,249,954	79,498,019	11,117,198	298,445	548,521	3,787,771	0
47	University of Illinois Chicago	93,226,032	6,664,139	60,848,108	574,806	2,914,386	13,916,592	0
48	University of California—San Francisco	93,194,073	9,229,185	77,916,558	1,519,266	1,160,318	1,245,977	330,000
49	University of Georgia—Athens	91,733,976	209,906	37,934,187	614,270	14,306,602	17,602,586	17,755,160

Table B.4—Continued

Rank	University or College	Total	DoD	HHS	NASA	DOE	NSF	USDA
50	University of California— Irvine	90,082,022	2,222,004	46,292,401	3,594,474	8,052,729	29,527,329	0
51	Iowa State University	88,762,215	4,371,463	21,263,170	1,764,325	3,005,233	24,417,981	32,918,043
52	Yale University	85,438,771	3,732,321	43,713,127	1,503,696	9,239,775	25,773,481	300,781
53	Virginia Polytechnic Institute	85,307,243	20,907,131	15,999,559	925,019	5,592,870	22,627,751	17,151,629
54	Oregon State University	85,090,046	7,788,062	16,026,410	3,820,707	6,014,744	23,790,450	15,492,338
55	Louisiana State University— Baton Rouge	82,579,936	6,575,994	29,188,596	1,849,589	5,773,761	12,873,578	20,809,791
56	Rockefeller University	82,523,825	225,654	80,555,337	0	973,732	769,102	0
57	University of Missouri— Columbia	82,184,849	2,912,381	23,298,086	1,045,738	3,806,049	13,928,606	34,251,768
58	Arizona State University	81,461,760	11,418,056	32,669,652	2,892,615	1,911,917	29,512,341	251,264
59	North Carolina State University	81,033,194	8,493,023	17,208,579	1,489,983	5,302,832	20,372,347	24,032,695
60	University of Utah	77,348,410	3,800,598	44,509,313	847,207	7,317,184	19,302,963	87,094
61	Indiana University Bloomington	76,945,710	1,565,320	40,062,227	782,252	4,378,707	26,908,108	113,714
62	Mississippi State University	76,911,360	16,534,098	2,970,878	229,299	5,446,266	4,750,321	41,066,837
63	New Mexico State University—Las Cruces	74,529,113	36,813,849	9,395,127	1,539,046	6,455,153	5,727,343	13,890,614
64	University of Alaska Fairbanks	72,582,178	11,640,470	11,064,077	1,371,055	2,544,660	15,058,208	16,874,813
65	University of Nevada Reno	69,290,805	12,405,901	7,453,154	712,471	31,527,207	12,153,256	2,514,328
66	New York University	66,893,119	7,480,067	30,679,455	662,665	2,540,538	20,465,213	0
67	University of Delaware	64,595,231	15,941,522	21,835,915	1,105,819	2,966,440	12,291,582	5,126,982

Table B.4—Continued

Rank	University or College	Total	DoD	HHS	NASA	DOE	NSF	USDA
68	University of California— Santa Cruz	63,882,393	4,010,223	17,148,364	21,344,380	3,269,772	16,022,387	869,588
69	Case Western Reserve University	62,655,231	3,119,430	46,849,463	4,225,235	910,987	7,385,103	0
70	University of New Mexico— Albuquerque	61,924,181	9,102,371	29,867,938	3,641,575	3,600,975	15,196,696	76,555
71	University of Kentucky	60,715,958	1,489,500	25,008,894	1,369,802	4,966,978	9,424,162	14,297,993
72	Washington State University	60,295,979	9,037,380	21,430,732	518,786	8,279,169	5,378,838	15,532,985
73	University of Massachusetts Amherst	60,049,575	7,106,769	15,468,152	1,539,130	8,436,847	21,101,064	5,218,312
74	George Mason University	59,121,493	7,080,982	28,860,746	11,968,188	4,148,274	4,260,855	270,808
75	University of Maryland— Baltimore	58,012,795	2,755,317	50,914,484	2,963,198	285,878	244,494	275,000
76	University of Iowa	57,270,993	6,400,936	36,295,577	2,888,664	1,342,687	9,044,684	10,850
77	University of Virginia	56,644,293	8,683,861	18,525,046	1,539,209	4,216,389	19,174,842	0
78	University of Nebraska— Lincoln	56,535,969	6,647,830	18,027,710	155,831	1,548,535	11,193,675	15,377,774
79	University of California— Riverside	55,914,906	15,924,663	12,493,136	2,196,207	3,451,723	14,642,718	3,882,408
80	Florida State University	55,774,364	11,726,973	11,477,992	1,611,445	9,055,185	15,887,907	3,564,427
81	Vanderbilt University	55,004,710	7,976,873	24,482,122	701,350	1,910,533	15,070,262	165,000
82	University of Kansas— Lawrence	54,578,397	596,744	30,149,469	1,056,794	4,210,257	12,833,564	0
83	State University of New York—Buffalo	53,460,386	3,110,421	27,967,246	78,523	1,305,738	12,754,386	0
84	University of New Hampshire Durham	53,391,154	1,432,236	2,732,017	6,652,162	893,002	6,448,121	2,519,857

Table B.4—Continued

Rank	University or College	Total	DoD	HHS	NASA	DOE	NSF	USDA
85	University of Miami	52,919,375	10,265,556	14,761,854	2,941,188	425,931	11,088,708	0
86	University of Connecticut—Storrs	52,477,998	4,518,595	16,114,412	1,031,927	1,619,565	10,722,034	11,361,867
87	Emory University	52,368,040	1,522,789	45,449,556	105,549	709,936	3,066,634	0
88	Montana State University—Bozeman	51,840,031	3,089,494	20,277,529	3,402,311	9,376,878	6,069,010	7,435,776
89	University of Notre Dame	51,186,454	6,752,111	17,812,915	805,209	8,115,492	17,087,755	0
90	Wayne State University	50,557,180	10,146,045	32,586,453	1,145,813	992,000	5,007,136	0
91	University of South Carolina at Columbia	50,177,371	2,573,566	23,467,509	2,500,464	3,829,175	10,101,683	25,000
92	George Washington University	49,943,581	237,186	45,140,281	327,758	1,202,436	2,427,827	0
93	University of Louisville	48,474,998	6,330,262	31,481,259	2,291,634	4,009,338	4,362,505	0
94	Washington University	48,408,922	2,435,547	25,513,233	4,912,408	3,954,716	10,788,961	425,069
95	University of Tennessee—Knoxville	46,046,292	2,763,853	9,018,417	1,352,478	7,663,633	13,265,088	8,816,475
96	University of Oregon	44,687,478	541,394	23,951,449	28,123	3,045,032	13,314,351	0
97	State University of New York—Stony Brook	44,496,514	2,444,016	10,981,466	1,206,360	2,744,194	23,906,428	300,000
98	Utah State University	44,239,650	14,539,236	7,151,252	4,097,136	680,000	3,781,093	11,470,580
99	University of Mississippi	43,921,144	8,515,108	5,385,371	158,750	1,179,118	861,580	22,951,767
100	Florida International University	41,779,657	5,817,176	13,389,749	632,197	8,243,666	9,872,592	0

Table B.5

The 100 Schools Receiving the Most FY 2005 Federal R&D Funds from the U.S. Department of Homeland Security, U.S. Department of Commerce, U.S. Department of Transportation, U.S. Department of the Interior, Environmental Protection Agency, and U.S. Department of Veterans Affairs, Excluding Medical-School Funding

Rank	University or College	DHS	DOC	DOT	DOI	EPA	VA
1	Johns Hopkins University	90,000	40,390	3,743,032	977,239	1,882,203	0
2	Massachusetts Institute of Technology	0	17,143,283	1,622,000	1,357,264	147,000	0
3	University of Wisconsin Madison	0	7,946,526	952,000	456,324	451,992	0
4	University of Washington	0	20,357,170	1,069,043	2,493,977	2,802,735	0
5	University of California—Berkeley	0	232,189	1,852,125	1,044,936	1,491,461	0
6	University of Michigan Ann Arbor	0	5,654,666	491,386	934,295	147,828	0
7	University of California—San Diego	0	20,223,830	0	139,831	65,312	0
8	Pennsylvania State University—University Park	0	822,509	937,000	708,404	0	0
9	Cornell University	0	660,028	0	269,911	255,730	0
10	University of Illinois Urbana-Champaign	0	1,967,468	1,269,138	492,301	110,493	0
11	Stanford University	0	166,600	0	526,152	366,784	1,400,018
12	University of California—Los Angeles	0	1,063,699	75,085	140,912	57,326	0
13	University of Minnesota—Twin Cities	0	1,511,559	2,000,000	336,174	344,860	0
14	Harvard University	0	1,265,502	0	125,525	1,399,987	0
15	University of Texas—Austin	24,956	287,445	11,555	118,468	500,941	0
16	Columbia University	0	13,901,899	0	466,975	2,291,753	0
17	Tufts University	0	0	0	56,021	0	0
18	University of Southern California	0	1,449,304	963,437	2,763,675	791,045	0
19	University of Hawaii at Manoa	0	21,314,328	0	2,351,275	809,982	0

Table B.5—Continued

Rank	University or College	DHS	DOC	DOT	DOI	EPA	VA
20	University of Texas MD Anderson Cancer Center	0	0	0	0	0	0
21	University of Pittsburgh	0	42,753	0	278,562	37,000	563,508
22	University of Pennsylvania	0	99,444	0	1,913,267	150,000	1,914,570
23	California Institute of Technology	0	0	0	1,262,500	111,000	0
24	University of Colorado Boulder	0	24,925,702	0	690,630	0	0
25	University of Maryland—College Park	0	8,482,577	-8,169	135,470	56,984	0
26	University of California—Davis	0	150,886	0	703,266	1,525,006	0
27	Georgia Institute of Technology	0	442,857	-420	48,122	569,673	0
28	University of Arizona	0	2,015,336	0	2,573,388	147,827	0
29	Ohio State University—Columbus	0	1,428,459	305,000	0	254,761	0
30	Rutgers, the State University of New Jersey—New Brunswick	0	4,961,238	2,509,188	0	29,582	0
31	Texas A&M University	0	4,414,634	766,471	252,984	676,566	0
32	University of North Carolina at Chapel Hill	0	1,043,288	500,000	0	3,001,425	0
33	Purdue University	0	511,743	75,500	100,676	492,000	0
34	Colorado State University—Fort Collins	0	9,163,761	0	1,291,392	292,333	0
35	University of Florida	0	3,164,911	0	1,159,803	738,834	0
36	University of Rochester	0	17,788	0	0	2,071,797	0
37	University of Alabama at Birmingham	0	0	917,898	0	0	1,050,354
38	Duke University	0	1,080,255	0	0	382,841	0
39	Princeton University	0	4,682,110	0	1,128,560	37,000	0
40	Boston University	0	226,310	0	0	96,844	0

Table B.5—Continued

Rank	University or College	DHS	DOC	DOT	DOI	EPA	VA
41	Michigan State University	0	133,618	349,873	302,425	2,810,215	0
42	Northwestern University Evanston	0	336,240	2,409,204	0	0	0
43	University of California—Santa Barbara	0	4,136,499	0	409,127	0	0
44	Carnegie Mellon University	0	363,994	0	1,668,270	59,696	0
45	University of Chicago	0	0	0	0	2,602,538	0
46	Illinois Institute of Technology	0	0	0	0	0	0
47	University of Illinois Chicago	0	0	0	9,591	0	0
48	University of California—San Francisco	0	0	0	0	0	778,033
49	University of Georgia—Athens	0	1,946,126	0	761,531	315,228	0
50	University of California—Irvine	0	270,562	0	69,902	50,000	0
51	Iowa State University	0	70,000	952,000	0	0	0
52	Yale University	0	399,631	0	168,828	174,666	0
53	Virginia Polytechnic Institute	0	1,148,639	78,356	292,417	91,769	0
54	Oregon State University	0	7,818,581	0	1,661,772	1,727,938	0
55	Louisiana State University—Baton Rouge	0	3,860,536	0	942,227	705,864	0
56	Rockefeller University	0	0	0	0	0	0
57	University of Missouri—Columbia	0	0	0	376,752	0	0
58	Arizona State University	0	0	236,720	55,877	285,441	0
59	North Carolina State University	0	3,057,521	0	25,005	916,529	0
60	University of Utah	0	487,506	0	996,545	0	0
61	Indiana University Bloomington	0	597,904	0	316,744	0	0
62	Mississippi State University	0	3,386,861	33,800	893,000	0	0

Table B.5—Continued

Rank	University or College	DHS	DOC	DOT	DOI	EPA	VA
63	New Mexico State University—Las Cruces	0	0	0	627,358	28,812	0
64	University of Alaska Fairbanks	0	9,999,329	0	4,204,875	0	0
65	University of Nevada Reno	0	133,188	0	2,311,721	79,579	0
66	New York University	0	70,000	0	0	0	0
67	University of Delaware	0	3,871,669	75,000	42,500	1,037,820	0
68	University of California—Santa Cruz	0	544,613	0	577,394	68,780	0
69	Case Western Reserve University	0	7,275	0	0	157,738	0
70	University of New Mexico—Albuquerque	0	136,625	180,000	78,000	43,446	0
71	University of Kentucky	0	0	0	117,311	41,318	0
72	Washington State University	0	6,701	52,201	59,187	0	0
73	University of Massachusetts Amherst	0	755,094	0	392,555	31,652	0
74	George Mason University	0	268,918	1,904,000	0	28,420	0
75	University of Maryland—Baltimore	0	0	0	0	574,424	0
76	University of Iowa	0	220,858	0	73,000	0	0
77	University of Virginia	0	211,855	0	31,611	0	0
78	University of Nebraska—Lincoln	0	118,570	590,000	176,839	0	0
79	University of California—Riverside	0	0	0	655,784	70,697	0
80	Florida State University	0	1,255,334	0	929,512	0	0
81	Vanderbilt University	0	201,221	0	0	0	0
82	University of Kansas—Lawrence	0	0	0	226,613	440,171	0
83	State University of New York—Buffalo	0	0	0	0	675,000	0
84	University of New Hampshire Durham	0	31,851,321	0	121,944	37,000	0

Table B.5—Continued

Rank	University or College	DHS	DOC	DOT	DOI	EPA	VA
85	University of Miami	-495	7,792,134	0	274,506	0	0
86	University of Connecticut—Storrs	0	3,287,921	0	108,898	1,912,800	0
87	Emory University	0	0	0	0	1,388,204	69,200
88	Montana State University—Bozeman	0	0	1,904,000	285,033	0	0
89	University of Notre Dame	0	504,541	0	0	0	0
90	Wayne State University	0	0	0	0	0	0
91	University of South Carolina at Columbia	0	5,776,726	0	295,704	1,608,579	0
92	George Washington University	0	370,475	0	0	0	0
93	University of Louisville	0	0	0	0	0	0
94	Washington University	0	14,119	0	0	29,936	0
95	University of Tennessee—Knoxville	0	13,044	937,000	140,283	520,436	0
96	University of Oregon	0	327,340	0	243,961	70,466	0
97	State University of New York—Stony Brook	0	2,874,050	0	40,000	0	0
98	Utah State University	0	1,300,000	0	742,125	0	0
99	University of Mississippi	0	4,757,274	0	112,176	0	0
100	Florida International University	0	3,286,150	100,000	278,467	129,658	0

NOTE: DOT = U.S. Department of Transportation. DOI = U.S. Department of the Interior. EPA = Environmental Protection Agency. VA = U.S. Department of Veterans Affairs.

Table B.6
The 100 Schools Receiving the Most FY 2005 Federal R&D Funds from the U.S. Department of Education, the U.S. Nuclear Regulatory Commission, the U.S. Department of Labor, the U.S. Department of Justice, the U.S. Department of Housing and Urban Development, and the Social Security Administration, Excluding Medical-School Funding

Rank	University or College	ED	NRC	DOL	DOJ	HUD	SSA
1	Johns Hopkins University	2,611,653	0	0	393	0	0
2	Massachusetts Institute of Technology	0	0	0	0	19,000	0
3	University of Wisconsin Madison	9,085,588	0	-19,972	0	0	0
4	University of Washington	4,347,823	0	0	0	5,802	0
5	University of California—Berkeley	6,625,850	0	0	-77	0	0
6	University of Michigan Ann Arbor	1,431,797	0	0	-27,056	41,170	2,274,632
7	University of California—San Diego	0	0	0	99,999	0	0
8	Pennsylvania State University—University Park	1,104,161	876,886	759,838	549,410	0	0
9	Cornell University	3,794,059	0	0	0	14,205	0
10	University of Illinois Urbana-Champaign	2,173,912	0	0	0	0	68,059
11	Stanford University	160,314	0	0	0	0	0
12	University of California—Los Angeles	6,444,218	0	0	0	33,902	0
13	University of Minnesota—Twin Cities	11,066,648	0	0	-1,807	21,809	0
14	Harvard University	4,296,658	0	0	0	0	0
15	University of Texas—Austin	1,232,246	0	0	0	19,749	0
16	Columbia University	125,579	0	-2,529	-1,567	0	0
17	Tufts University	23,858	0	0	0	0	0
18	University of Southern California	2,720,822	0	0	0	14,088	0
19	University of Hawaii at Manoa	618,467	0	3,280,530	0	0	0
20	University of Texas MD Anderson Cancer Center	0	0	0	0	0	0

Table B.6—Continued

Rank	University or College	ED	NRC	DOL	DOJ	HUD	SSA
21	University of Pittsburgh	3,259,120	0	0	0	16,481	0
22	University of Pennsylvania	5,465,163	0	0	0	26,095	0
23	California Institute of Technology	0	0	0	0	0	0
24	University of Colorado Boulder	108,020	0	0	0	0	0
25	University of Maryland—College Park	3,532,821	0	0	-36,648	0	0
26	University of California—Davis	898,000	0	0	0	0	0
27	Georgia Institute of Technology	4,626,012	0	0	0	12,000	0
28	University of Arizona	380,679	0	0	183,975	0	0
29	Ohio State University—Columbus	5,393,543	0	0	0	9,760	0
30	Rutgers, the State University of New Jersey—New Brunswick	232,835	0	0	50	0	0
31	Texas A&M University	3,283,331	0	0	0	0	0
32	University of North Carolina at Chapel Hill	748,412	0	0	0	0	0
33	Purdue University	1,490,693	686,500	0	0	0	0
34	Colorado State University—Fort Collins	0	0	0	0	0	0
35	University of Florida	1,387,434	0	0	0	0	0
36	University of Rochester	299,985	0	0	0	0	0
37	University of Alabama at Birmingham	1,204,891	0	0	0	0	0
38	Duke University	2,100,694	0	0	0	0	0
39	Princeton University	0	0	0	0	0	0
40	Boston University	3,214,867	0	0	0	0	0
41	Michigan State University	1,389,770	0	0	0	0	0
42	Northwestern University Evanston	2,415,276	0	0	0	0	0

Table B.6—Continued

Rank	University or College	ED	NRC	DOL	DOJ	HUD	SSA
43	University of California—Santa Barbara	234,270	64,000	0	0	0	0
44	Carnegie Mellon University	993,346	0	0	-3,922	0	0
45	University of Chicago	5,775,679	0	0	0	2,079	0
46	Illinois Institute of Technology	0	0	0	0	0	0
47	University of Illinois Chicago	8,315,124	0	0	-16,714	0	0
48	University of California—San Francisco	1,014,736	0	0	0	0	0
49	University of Georgia—Athens	274,830	0	0	0	13,550	0
50	University of California—Irvine	0	0	0	0	2,621	0
51	Iowa State University	0	0	0	0	0	0
52	Yale University	432,465	0	0	0	0	0
53	Virginia Polytechnic Institute	0	0	0	0	492,103	0
54	Oregon State University	949,044	0	0	0	0	0
55	Louisiana State University—Baton Rouge	0	0	0	0	0	0
56	Rockefeller University	0	0	0	0	0	0
57	University of Missouri—Columbia	2,548,432	0	0	0	17,037	0
58	Arizona State University	1,888,427	0	0	339,450	0	0
59	North Carolina State University	129,201	0	0	0	5,479	0
60	University of Utah	0	0	0	0	0	0
61	Indiana University Bloomington	2,220,734	0	0	0	0	0
62	Mississippi State University	1,600,000	0	0	0	0	0
63	New Mexico State University—Las Cruces	24,665	0	0	0	27,146	0
64	University of Alaska Fairbanks	0	0	-175,309	0	0	0

Table B.6—Continued

Rank	University or College	ED	NRC	DOL	DOJ	HUD	SSA
65	University of Nevada Reno	0	0	0	0	0	0
66	New York University	4,995,181	0	0	0	0	0
67	University of Delaware	299,982	0	0	0	0	0
68	University of California—Santa Cruz	26,892	0	0	0	0	0
69	Case Western Reserve University	0	0	0	0	0	0
70	University of New Mexico—Albuquerque	0	0	0	0	0	0
71	University of Kentucky	4,000,000	0	0	0	0	0
72	Washington State University	0	0	0	0	0	0
73	University of Massachusetts Amherst	0	0	0	0	0	0
74	George Mason University	299,999	0	0	0	30,303	0
75	University of Maryland—Baltimore	0	0	0	0	0	0
76	University of Iowa	993,737	0	0	0	0	0
77	University of Virginia	4,218,905	0	0	42,575	0	0
78	University of Nebraska—Lincoln	2,699,205	0	0	0	0	0
79	University of California—Riverside	2,593,570	0	0	0	4,000	0
80	Florida State University	250,000	0	0	0	15,589	0
81	Vanderbilt University	4,497,349	0	0	0	0	0
82	University of Kansas—Lawrence	5,063,503	0	0	0	1,282	0
83	State University of New York—Buffalo	7,569,072	0	0	0	0	0
84	University of New Hampshire Durham	703,494	0	0	0	0	0
85	University of Miami	5,369,993	0	0	0	0	0
86	University of Connecticut—Storrs	1,795,477	0	0	0	4,502	0

Table B.6—Continued

Rank	University or College	ED	NRC	DOL	DOJ	HUD	SSA
87	Emory University	56,172	0	0	0	0	0
88	Montana State University—Bozeman	0	0	0	0	0	0
89	University of Notre Dame	74,451	0	0	0	33,980	0
90	Wayne State University	514,384	0	0	149,493	15,856	0
91	University of South Carolina at Columbia	0	0	0	-1,035	0	0
92	George Washington University	177,977	0	0	-389	60,030	0
93	University of Louisville	0	0	0	0	0	0
94	Washington University	316,785	0	0	0	18,148	0
95	University of Tennessee—Knoxville	1,000,000	0	0	555,585	0	0
96	University of Oregon	3,165,362	0	0	0	0	0
97	State University of New York—Stony Brook	0	0	0	0	0	0
98	Utah State University	478,228	0	0	0	0	0
99	University of Mississippi	0	0	0	0	0	0
100	Florida International University	0	0	0	30,002	0	0

NOTE: ED = U.S. Department of Education. NRC = U.S. Nuclear Regulatory Commission. DOL = U.S. Department of Labor. DOJ = U.S. Department of Justice. HUD = U.S. Department of Housing and Urban Development. SSA = U.S. Social Security Administration.

Table B.7
The 100 Schools Receiving the Most FY 2005 Federal R&D Funds from the U.S. Department of Health and Human Services, Including Medical-School Funding

Rank	University or College	Total	Contracts	Project Grants	Other
1	Johns Hopkins University	597,346,205	24,938,384	474,428,086	97,979,735
2	University of Pennsylvania	471,760,000	2,777,579	421,174,210	47,808,211
3	University of Washington	459,202,741	12,004,106	370,109,842	77,088,793
4	University of California—San Francisco	436,416,016	16,421,532	360,960,995	59,033,489
5	Washington University	395,743,845	8,478,103	297,116,075	90,149,667
6	University of Michigan Ann Arbor	390,639,792	9,442,684	336,806,486	44,390,622
7	Duke University	389,124,447	16,377,462	283,186,562	89,560,423
8	University of Pittsburgh	388,835,522	14,058,996	312,564,839	62,211,687
9	University of California—Los Angeles	388,645,311	4,824,734	317,602,007	66,218,570
10	Yale University	338,296,923	2,953,524	308,056,098	27,287,301
11	Harvard University	328,281,499	3,847,558	273,333,125	51,100,816
12	Columbia University	323,021,102	6,002,643	287,174,483	29,843,976
13	University of California—San Diego	310,935,422	6,042,626	261,479,205	43,413,591
14	Stanford University	309,548,555	2,104,469	270,020,261	37,423,825
15	University of North Carolina at Chapel Hill	303,423,177	3,124,024	266,212,527	34,086,626
16	Case Western Reserve University	281,610,021	29,380,719	229,402,192	22,827,110
17	University of Wisconsin Madison	275,557,907	30,120,742	231,777,216	13,659,949
18	Vanderbilt University	265,185,886	330,178	236,349,738	28,505,970
19	University of Alabama at Birmingham	261,272,787	43,798,426	158,693,512	58,780,849
20	Baylor College of Medicine	252,240,137	10,305,236	184,733,507	57,201,394
21	Emory University	233,040,010	15,288,168	188,953,796	28,798,046
22	University of Minnesota—Twin Cities	232,956,862	11,623,888	185,230,554	36,102,420
23	University of Chicago	201,665,096	7,148,716	151,141,760	43,374,620
24	Massachusetts Institute of Technology	194,168,565	521	127,267,310	66,900,734
25	Cornell University	194,057,622	9,491,300	172,746,119	11,820,203
26	University of Colorado Health Sciences Center	186,796,910	6,249,165	159,720,110	20,827,635
27	University of Southern California	182,574,959	4,205,808	153,519,100	24,850,051
28	University of Maryland—Baltimore	182,253,889	29,998,793	123,337,058	28,918,038
29	Oregon Health and Science University	178,786,508	2,793,230	162,485,934	13,507,344
30	Mount Sinai School of Medicine	175,698,123	10,340,504	141,881,152	23,476,467
31	Mayo Medical School	171,193,261	12,924,694	140,427,611	17,840,956

Table B.7—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
32	University of Texas Southwestern Medical Center Dallas	170,894,011	5,103,649	142,315,954	23,474,408
33	Northwestern University Evanston	170,709,612	3,238,196	147,161,601	20,309,815
34	University of Iowa	166,049,814	1,268,827	158,931,863	5,849,124
35	University of Rochester	160,993,956	5,582,464	135,214,546	20,196,946
36	Yeshiva University	157,295,547	4,970,306	149,312,250	3,012,991
37	Boston University	154,790,077	697,077	144,049,800	10,043,200
38	University of Texas MD Anderson Cancer Center	153,626,025	3,437,424	137,765,164	12,423,437
39	New York University	153,315,466	405,176	144,457,193	8,453,097
40	University of Virginia	152,551,326	79,616	139,110,302	13,361,408
41	University of California—Davis	143,951,218	1,859,776	129,224,457	12,866,985
42	University of Illinois Chicago	138,953,511	3,657,806	121,699,275	13,596,430
43	University of Utah	127,322,059	5,936,032	110,713,194	10,672,833
44	University of California—Irvine	126,651,309	2,971,025	106,011,693	17,668,591
45	University of Florida	125,767,611	1,190,029	112,375,364	12,202,218
46	Wake Forest University	124,828,775	17,277,570	81,904,677	25,646,528
47	University of Medicine and Dentistry of New Jersey	123,568,526	3,416,483	101,027,218	19,124,825
48	Ohio State University—Columbus	122,457,871	5,042,058	105,696,600	11,719,213
49	University of Massachusetts Medical School	117,593,950	974,985	109,692,772	6,926,193
50	University of Texas Medical Branch Galveston	114,717,149	12,284,979	81,438,450	20,993,720
51	University of Arizona	109,686,584	3,183,534	99,747,181	6,755,869
52	University of Cincinnati	107,849,139	2,735,140	88,203,374	16,910,625
53	University of California—Berkeley	100,558,200	20,000	100,252,775	285,425
54	Indiana University—Purdue University at Indianapolis	99,352,102	0	85,953,830	13,398,272
55	University of Miami	96,973,050	2,521,398	74,697,666	19,753,986
56	Dartmouth College	91,312,059	254,016	89,227,265	1,830,778
57	Wayne State University	88,648,506	6,833,471	75,526,249	6,288,786
58	University of Kentucky	86,346,080	1,818,040	80,810,713	3,717,327
59	University of Texas Health Science Center Houston	85,476,783	418,793	73,275,214	11,782,776
60	Medical University of South Carolina	85,364,195	656,645	79,482,172	5,225,378
61	Tufts University	83,696,981	5,981,877	59,605,060	18,110,044

Table B.7—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
62	Medical College of Wisconsin	82,392,178	1,024,338	70,419,155	10,948,685
63	Rockefeller University	80,555,337	4,599,223	70,092,168	5,863,946
64	University of Texas Health Science Center San Antonio	79,711,058	1,171,962	68,414,449	10,124,647
65	University of Connecticut—Storrs	77,178,961	0	73,141,989	4,036,972
66	University of Louisville	75,099,435	0	52,075,113	23,024,322
67	Tulane University	74,590,136	0	56,581,470	18,008,666
68	Thomas Jefferson University—Jefferson Medical College	73,570,505	0	69,387,199	4,183,306
69	Virginia Commonwealth University	72,907,872	5,783,813	61,815,894	5,308,165
70	University of Hawaii at Manoa	71,772,660	1,850,581	35,222,008	34,700,071
71	Georgetown University	67,911,993	2,675,651	58,303,320	6,933,022
72	University of New Mexico—Albuquerque	67,293,169	13,834,742	44,042,392	9,416,035
73	University of Vermont	65,362,082	365,889	63,795,657	1,200,536
74	State University of New York—Stony Brook	64,969,722	628,252	61,947,267	2,394,203
75	Rutgers, the State University of New Jersey—New Brunswick	64,186,411	4,197,078	43,726,160	16,263,173
76	George Washington University	60,569,629	2,028,768	15,386,830	43,154,031
77	University of Illinois Urbana-Champaign	58,177,650	0	57,575,787	601,863
78	Louisiana State University Health Science Center	54,685,430	1,849,845	50,627,754	2,207,831
79	State University of New York—Buffalo	54,569,210	1,271,855	52,778,954	518,401
80	Colorado State University—Fort Collins	54,422,461	7,086,530	32,583,535	14,752,396
81	University of Tennessee Health Science Center	53,992,629	2,034,678	40,931,129	11,026,822
82	University of Arkansas for Medical Sciences	53,542,681	0	51,491,168	2,051,513
83	Brown University	52,808,578	0	46,898,307	5,910,271
84	University of South Florida—Tampa	50,281,020	0	25,248,137	25,032,883
85	University of Texas—Austin	49,875,248	97,400	46,945,240	2,832,608
86	Rush Medical College of Rush University	46,536,089	7,391,675	36,804,159	2,340,255
87	California Institute of Technology	46,343,469	0	41,923,529	4,419,940
88	Pennsylvania State University College of Medicine	46,223,472	236,201	41,434,305	4,552,966
89	University of Oklahoma Health Sciences Center	44,654,599	6,515,382	35,387,537	2,751,680
90	Temple University	43,557,474	85,154	40,619,994	2,852,326

Table B.7—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
91	University of Nebraska Medical Center	43,287,598	0	40,069,490	3,218,108
92	Michigan State University	42,750,982	0	40,491,168	2,259,814
93	University of Colorado Boulder	42,386,963	0	41,903,896	483,067
94	Purdue University	41,193,889	0	40,630,306	563,583
95	Pennsylvania State University—University Park	40,826,970	1,466,922	38,249,850	1,110,198
96	St. Louis University	40,467,347	9,104,588	28,752,525	2,610,234
97	Indiana University Bloomington	40,062,227	939,685	38,459,365	663,177
98	Texas A&M University	38,889,374	878,526	36,239,862	1,770,986
99	University of Missouri—Columbia	38,846,611	17,985	36,604,722	2,223,904
100	University of Georgia—Athens	37,934,187	2,576,292	35,357,895	0

Table B.8
The 100 Schools Receiving the Most FY 2005 Federal R&D Funds from the U.S. Department of Health and Human Services, Excluding Medical-School Funding

Rank	University or College	Total	Contracts	Project Grants	Other
1	Massachusetts Institute of Technology	194,168,565	521	127,267,310	66,900,734
2	Johns Hopkins University	184,737,419	24,938,384	117,929,998	41,869,037
3	University of Washington	168,319,665	12,004,106	133,605,844	22,709,715
4	University of Texas MD Anderson Cancer Center	153,626,025	3,437,424	137,765,164	12,423,437
5	University of Wisconsin Madison	148,115,357	30,120,742	112,131,371	5,863,244
6	University of Michigan Ann Arbor	132,856,171	9,442,684	102,811,437	20,602,050
7	Harvard University	131,715,145	3,847,558	103,063,458	24,804,129
8	University of Pittsburgh	116,736,267	14,058,996	72,276,595	30,400,676
9	University of California—Berkeley	100,558,200	20,000	100,252,775	285,425
10	University of Minnesota—Twin Cities	97,986,014	11,623,888	62,498,055	23,864,071
11	University of California—Los Angeles	92,148,445	4,824,734	76,375,423	10,948,288
12	University of North Carolina at Chapel Hill	90,464,840	3,087,540	76,882,160	10,495,140
13	University of Alabama at Birmingham	88,738,249	43,798,426	32,140,286	12,799,537
14	Columbia University	84,545,520	2,368,209	74,172,453	8,004,858
15	Rockefeller University	80,555,337	4,599,223	70,092,168	5,863,946
16	University of California—San Diego	80,423,539	6,042,626	66,879,851	7,501,062
17	University of Pennsylvania	79,971,476	2,777,579	69,903,188	7,290,709
18	University of California—San Francisco	77,916,558	16,421,532	54,519,264	6,975,762
19	Cornell University	72,473,985	5,800,790	66,673,195	0
20	Rutgers, the State University of New Jersey—New Brunswick	64,186,411	4,197,078	43,726,160	16,263,173
21	University of Illinois Chicago	60,848,108	3,657,806	48,313,333	8,876,969
22	Duke University	60,676,727	13,887,485	40,663,311	6,125,931
23	University of California—Davis	58,503,010	1,859,776	50,356,138	6,287,096
24	University of Illinois Urbana-Champaign	58,177,650	0	57,575,787	601,863
25	Colorado State University—Fort Collins	54,422,461	7,086,530	32,583,535	14,752,396
26	Boston University	53,142,427	697,077	48,928,793	3,516,557
27	University of Hawaii at Manoa	51,762,224	1,850,581	23,206,187	26,705,456
28	University of Maryland—Baltimore	50,914,484	29,998,793	20,915,691	0
29	University of Southern California	50,432,025	4,205,808	45,177,534	1,048,683
30	University of Texas—Austin	49,875,248	97,400	46,945,240	2,832,608

Table B.8—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
31	Northwestern University Evanston	48,242,366	3,238,196	36,955,580	8,048,590
32	Stanford University	47,184,240	2,104,469	45,079,771	0
33	Case Western Reserve University	46,849,463	27,659,530	19,189,933	0
34	California Institute of Technology	46,343,469	0	41,923,529	4,419,940
35	University of California—Irvine	46,292,401	2,971,025	41,132,195	2,189,181
36	Emory University	45,449,556	15,288,168	26,811,329	3,350,059
37	George Washington University	45,140,281	2,028,768	2,258,560	40,852,953
38	University of Florida	44,618,625	1,190,029	40,358,617	3,069,979
39	University of Utah	44,509,313	5,936,032	36,597,818	1,975,463
40	Yale University	43,713,127	2,953,524	38,209,174	2,550,429
41	University of Colorado Boulder	42,386,963	0	41,903,896	483,067
42	Ohio State University—Columbus	41,742,934	5,034,858	33,774,497	2,933,579
43	Purdue University	41,193,889	0	40,630,306	563,583
44	Pennsylvania State University—University Park	40,826,970	1,466,922	38,249,850	1,110,198
45	Indiana University Bloomington	40,062,227	939,685	38,459,365	663,177
46	Texas A&M University	38,889,374	878,526	36,239,862	1,770,986
47	University of Arizona	38,498,845	3,183,534	35,239,312	75,999
48	Tufts University	38,129,443	5,981,877	15,641,437	16,506,129
49	University of Georgia—Athens	37,934,187	2,576,292	35,357,895	0
50	Princeton University	37,477,278	0	37,477,278	0
51	University of Iowa	36,295,577	1,268,827	34,725,095	301,655
52	University of Chicago	33,143,370	7,148,716	16,794,654	9,200,000
53	Arizona State University	32,669,652	0	27,417,462	5,252,190
54	Wayne State University	32,586,453	6,833,471	25,127,615	625,367
55	City University of New York System	32,143,665	0	31,672,353	471,312
56	University of Louisville	31,481,259	0	8,940,715	22,540,544
57	New York University	30,679,455	405,176	27,578,465	2,695,814
58	University of Kansas—Lawrence	30,149,469	742,412	28,542,923	864,134
59	University of New Mexico—Albuquerque	29,867,938	13,834,742	12,468,029	3,565,167
60	Louisiana State University—Baton Rouge	29,188,596	490,244	22,933,433	5,764,919
61	Michigan State University	28,983,752	0	28,200,569	783,183
62	George Mason University	28,860,746	0	3,455,510	25,405,236
63	University of Rochester	28,625,731	5,582,464	22,743,333	299,934

Table B.8—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
64	Brandeis University	28,035,126	3,538,179	24,496,947	0
65	State University of New York—Buffalo	27,967,246	1,271,855	26,695,391	0
66	University of Texas Health Science Center Houston	25,938,231	0	18,680,846	7,257,385
67	Washington University	25,513,233	5,362,477	18,693,423	1,457,333
68	University of Kentucky	25,008,894	1,818,040	21,694,772	1,496,082
69	Vanderbilt University	24,482,122	354,577	22,930,614	1,196,931
70	University of Maryland—College Park	24,304,521	608,921	23,109,876	585,724
71	University of Oregon	23,951,449	0	23,951,449	0
72	University of South Carolina at Columbia	23,467,509	0	21,754,957	1,712,552
73	University of Missouri—Columbia	23,298,086	17,985	22,156,197	1,123,904
74	University of Delaware	21,835,915	0	20,750,736	1,085,179
75	Washington State University	21,430,732	0	21,430,732	0
76	Iowa State University	21,263,170	0	21,263,170	0
77	California State University—San Diego	20,440,584	0	17,748,457	2,692,127
78	Montana State University—Bozeman	20,277,529	2,279,857	17,997,672	0
79	Wake Forest University	19,728,366	16,868,135	2,860,231	0
80	University of Virginia	18,525,046	79,616	17,961,184	484,246
81	Temple University	18,075,730	85,154	16,565,898	1,424,678
82	University of Nebraska—Lincoln	18,027,710	0	18,027,710	0
83	Georgia Institute of Technology	17,866,697	0	17,090,231	776,466
84	University of Notre Dame	17,812,915	2,126,840	15,686,075	0
85	North Carolina State University	17,208,579	0	17,208,579	0
86	University of California—Santa Cruz	17,148,364	0	15,963,396	1,184,968
87	Carnegie Mellon University	16,516,716	520,000	15,996,716	0
88	Virginia Commonwealth University	16,468,770	5,783,813	9,665,447	1,019,510
89	St. Louis University	16,400,271	9,104,588	7,295,683	0
90	University of Connecticut—Storrs	16,114,412	0	16,114,412	0
91	Oregon State University	16,026,410	0	16,026,410	0
92	Virginia Polytechnic Institute	15,999,559	4,532,508	10,113,098	1,353,953
93	University of Massachusetts Amherst	15,468,152	0	15,468,152	0
94	University of California—Santa Barbara	14,921,231	0	14,921,231	0
95	University of Miami	14,761,854	2,521,398	12,240,456	0
96	Florida International University	13,389,749	0	13,389,749	0

Table B.8—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
97	University of North Texas Health Science Center	13,062,687	1,013,044	11,415,433	634,210
98	University of Texas—San Antonio	13,034,714	0	13,034,714	0
99	University of Maryland Biotechnology Institute	12,787,272	0	12,787,272	0
100	University of Houston—Downtown	12,521,424	0	12,302,970	218,454

Table B.9
The 100 Schools Receiving the Most FY 2005 Federal R&D Funds from the National Science Foundation, Including Medical-School Funding

Rank	University or College	Total	Contracts	Project Grants	Other
1	University of Wisconsin Madison	102,159,098	0	93,595,761	8,563,337
2	Massachusetts Institute of Technology	94,914,984	0	81,075,764	13,839,220
3	Cornell University	92,732,298	0	48,801,750	43,930,548
4	University of California—San Diego	90,161,413	0	55,437,870	34,723,543
5	University of Illinois Urbana-Champaign	89,894,514	0	53,100,249	36,794,265
6	University of Washington	71,044,845	0	57,912,633	13,132,212
7	University of Michigan Ann Arbor	66,839,575	0	56,924,097	9,915,478
8	University of California—Berkeley	66,420,027	0	56,343,219	10,076,808
9	California Institute of Technology	64,616,365	0	27,560,368	37,055,997
10	University of California—Los Angeles	63,858,927	0	52,120,037	11,738,890
11	Columbia University	55,555,673	0	50,912,883	4,642,790
12	Stanford University	49,945,802	0	43,758,447	6,187,355
13	Pennsylvania State University—University Park	46,344,874	0	42,938,560	3,406,314
14	University of Chicago	45,668,001	0	29,436,600	16,231,401
15	University of Southern California	45,611,907	0	32,937,482	12,674,425
16	Carnegie Mellon University	45,572,485	0	41,262,521	4,309,964
17	University of Minnesota—Twin Cities	43,831,588	0	34,370,913	9,460,675
18	University of California—Santa Barbara	42,642,578	0	33,584,981	9,057,597
19	Princeton University	42,205,010	0	33,331,201	8,873,809
20	University of California—Davis	40,500,509	0	33,958,921	6,541,588
21	Rutgers, the State University of New Jersey—New Brunswick	39,051,672	0	31,618,272	7,433,400
22	Georgia Institute of Technology	39,010,388	0	33,500,848	5,509,540
23	Purdue University	38,845,031	0	33,404,458	5,440,573
24	Ohio State University—Columbus	38,605,277	0	33,972,276	4,633,001
25	University of Texas—Austin	37,405,660	0	35,239,733	2,165,927
26	University of Colorado Boulder	36,457,624	0	35,427,624	1,030,000
27	University of Maryland—College Park	35,579,323	0	33,779,323	1,800,000
28	Boston University	35,562,089	0	20,667,577	14,894,512
29	University of Arizona	34,241,634	0	27,205,015	7,036,619
30	University of Florida	31,811,404	0	30,009,461	1,801,943
31	Harvard University	30,741,268	0	26,863,768	3,877,500

Table B.9—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
32	Michigan State University	29,690,816	0	29,690,816	0
33	University of California—Irvine	29,527,329	0	27,288,321	2,239,008
34	Arizona State University	29,512,341	0	26,812,342	2,699,999
35	Northwestern University Evanston	28,200,601	0	23,264,110	4,936,491
36	Texas A&M University	27,544,207	0	26,418,707	1,125,500
37	Indiana University Bloomington	26,908,108	0	20,204,163	6,703,945
38	Johns Hopkins University	26,467,585	0	18,741,745	7,725,840
39	Yale University	25,773,481	0	23,043,481	2,730,000
40	University of Pennsylvania	25,456,363	0	20,856,363	4,600,000
41	Duke University	24,633,711	0	22,633,711	2,000,000
42	Iowa State University	24,417,981	0	23,358,525	1,059,456
43	State University of New York—Stony Brook	23,906,428	0	20,544,056	3,362,372
44	Oregon State University	23,790,450	0	23,790,450	0
45	Colorado State University—Fort Collins	22,916,553	0	18,593,547	4,323,006
46	Virginia Polytechnic Institute	22,627,751	0	17,697,297	4,930,454
47	University of North Carolina at Chapel Hill	22,534,821	0	18,534,821	4,000,000
48	University of Massachusetts Amherst	21,101,064	0	15,509,440	5,591,624
49	New York University	21,027,576	0	20,945,576	82,000
50	North Carolina State University	20,372,347	0	20,215,685	156,662
51	University of Utah	19,302,963	0	18,082,138	1,220,825
52	University of Virginia	19,174,842	0	17,746,842	1,428,000
53	Rice University	18,476,825	0	14,391,689	4,085,136
54	Rensselaer Polytechnic Institute	18,393,808	0	15,560,808	2,833,000
55	University of Georgia—Athens	17,602,586	0	17,602,586	0
56	University of Notre Dame	17,087,755	0	15,087,755	2,000,000
57	University of Hawaii at Manoa	17,079,966	0	17,079,966	0
58	University of Pittsburgh	16,772,309	0	16,772,309	0
59	University of California—Santa Cruz	16,022,387	0	12,022,387	4,000,000
60	Florida State University	15,887,907	0	15,545,348	342,559
61	University of New Mexico—Albuquerque	15,512,217	0	13,204,471	2,307,746
62	Vanderbilt University	15,070,262	0	12,899,970	2,170,292
63	University of Alaska Fairbanks	15,058,208	0	15,058,208	0

Table B.9—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
64	University of California—Riverside	14,642,718	0	14,642,718	0
65	Brown University	14,025,750	0	13,170,750	855,000
66	University of Missouri—Columbia	13,928,606	0	12,038,666	1,889,940
67	University of Illinois Chicago	13,916,592	0	11,916,592	2,000,000
68	University of Oregon	13,314,351	0	13,314,351	0
69	University of Tennessee—Knoxville	13,265,088	0	11,716,157	1,548,931
70	Louisiana State University—Baton Rouge	12,873,578	0	12,873,578	0
71	University of Kansas—Lawrence	12,833,564	0	10,207,239	2,626,325
72	Dartmouth College	12,769,471	0	8,669,911	4,099,560
73	State University of New York—Buffalo	12,754,386	0	10,640,452	2,113,934
74	Northeastern University	12,754,167	0	6,050,317	6,703,850
75	University of Delaware	12,291,582	0	12,291,582	0
76	University of Nevada Reno	12,153,256	0	12,153,256	0
77	Washington University	12,023,367	0	12,023,367	0
78	University of Miami	11,211,173	0	11,211,173	0
79	University of Nebraska—Lincoln	11,193,675	0	8,792,966	2,400,709
80	University of Connecticut—Storrs	11,051,149	0	11,051,149	0
81	University of South Carolina at Columbia	10,101,683	0	10,101,683	0
82	Florida International University	9,872,592	0	5,686,970	4,185,622
83	University of Kentucky	9,424,162	0	8,624,162	800,000
84	Kansas State University	9,369,600	0	9,369,600	0
85	Clemson University	9,072,784	0	5,044,388	4,028,396
86	University of Iowa	9,044,684	0	9,044,684	0
87	University of Oklahoma—Norman	8,784,478	0	7,247,937	1,536,541
88	University of South Florida—Tampa	8,674,378	0	8,674,378	0
89	California State University—San Diego	8,239,633	0	8,239,633	0
90	University of Wyoming	8,184,439	0	7,110,455	1,073,984
91	Drexel University	7,918,762	0	7,918,762	0
92	University of Rhode Island—Kingston	7,818,607	0	7,818,607	0
93	Lehigh University	7,642,919	0	7,642,919	0
94	Michigan Technological University	7,440,171	0	7,440,171	0
95	Georgia State University	7,404,925	0	3,448,533	3,956,392
96	Case Western Reserve University	7,385,103	0	7,385,103	0

Table B.9—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
97	College of William and Mary	6,991,412	0	6,991,412	0
98	New Jersey Institute of Technology	6,905,249	0	6,905,249	0
99	Old Dominion University	6,687,845	0	6,687,845	0
100	University of Rochester	6,620,653	0	6,620,653	0

Table B.10
The 100 Schools Receiving the Most FY 2005 Federal R&D Funds from the National Science Foundation, Excluding Medical-School Funding

Rank	University or College	Total	Contracts	Project Grants	Other
1	University of Wisconsin Madison	102,159,098	0	93,595,761	8,563,337
2	Massachusetts Institute of Technology	94,914,984	0	81,075,764	13,839,220
3	Cornell University	92,053,182	0	48,122,634	43,930,548
4	University of California—San Diego	90,161,413	0	55,437,870	34,723,543
5	University of Illinois Urbana-Champaign	89,894,514	0	53,100,249	36,794,265
6	University of Washington	71,044,845	0	57,912,633	13,132,212
7	University of Michigan Ann Arbor	66,839,575	0	56,924,097	9,915,478
8	University of California—Berkeley	66,420,027	0	56,343,219	10,076,808
9	California Institute of Technology	64,616,365	0	27,560,368	37,055,997
10	University of California—Los Angeles	63,858,927	0	52,120,037	11,738,890
11	Columbia University	55,555,673	0	50,912,883	4,642,790
12	Stanford University	49,945,802	0	43,758,447	6,187,355
13	Pennsylvania State University—University Park	46,344,874	0	42,938,560	3,406,314
14	University of Chicago	45,668,001	0	29,436,600	16,231,401
15	University of Southern California	45,611,907	0	32,937,482	12,674,425
16	Carnegie Mellon University	45,572,485	0	41,262,521	4,309,964
17	University of Minnesota—Twin Cities	43,831,588	0	34,370,913	9,460,675
18	University of California—Santa Barbara	42,642,578	0	33,584,981	9,057,597
19	Princeton University	42,205,010	0	33,331,201	8,873,809
20	University of California—Davis	40,500,509	0	33,958,921	6,541,588
21	Rutgers, the State University of New Jersey—New Brunswick	39,051,672	0	31,618,272	7,433,400
22	Georgia Institute of Technology	39,010,388	0	33,500,848	5,509,540
23	Purdue University	38,845,031	0	33,404,458	5,440,573
24	Ohio State University—Columbus	38,605,277	0	33,972,276	4,633,001
25	University of Texas—Austin	37,405,660	0	35,239,733	2,165,927
26	University of Colorado Boulder	36,457,624	0	35,427,624	1,030,000
27	University of Maryland—College Park	35,579,323	0	33,779,323	1,800,000
28	Boston University	35,562,089	0	20,667,577	14,894,512
29	University of Arizona	34,241,634	0	27,205,015	7,036,619
30	University of Florida	31,811,404	0	30,009,461	1,801,943
31	Harvard University	30,741,268	0	26,863,768	3,877,500

Table B.10—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
32	Michigan State University	29,690,816	0	29,690,816	0
33	University of California—Irvine	29,527,329	0	27,288,321	2,239,008
34	Arizona State University	29,512,341	0	26,812,342	2,699,999
35	Northwestern University Evanston	28,132,601	0	23,196,110	4,936,491
36	Texas A&M University	27,544,207	0	26,418,707	1,125,500
37	Indiana University Bloomington	26,908,108	0	20,204,163	6,703,945
38	Johns Hopkins University	26,467,585	0	18,741,745	7,725,840
39	Yale University	25,773,481	0	23,043,481	2,730,000
40	University of Pennsylvania	25,456,363	0	20,856,363	4,600,000
41	Duke University	24,633,711	0	22,633,711	2,000,000
42	Iowa State University	24,417,981	0	23,358,525	1,059,456
43	State University of New York—Stony Brook	23,906,428	0	20,544,056	3,362,372
44	Oregon State University	23,790,450	0	23,790,450	0
45	Colorado State University—Fort Collins	22,916,553	0	18,593,547	4,323,006
46	Virginia Polytechnic Institute	22,627,751	0	17,697,297	4,930,454
47	University of North Carolina at Chapel Hill	22,534,821	0	18,534,821	4,000,000
48	University of Massachusetts Amherst	21,101,064	0	15,509,440	5,591,624
49	New York University	20,465,213	0	20,383,213	82,000
50	North Carolina State University	20,372,347	0	20,215,685	156,662
51	University of Utah	19,302,963	0	18,082,138	1,220,825
52	University of Virginia	19,174,842	0	17,746,842	1,428,000
53	Rice University	18,476,825	0	14,391,689	4,085,136
54	Rensselaer Polytechnic Institute	18,393,808	0	15,560,808	2,833,000
55	University of Georgia—Athens	17,602,586	0	17,602,586	0
56	University of Notre Dame	17,087,755	0	15,087,755	2,000,000
57	University of Hawaii at Manoa	17,079,966	0	17,079,966	0
58	University of Pittsburgh	16,772,309	0	16,772,309	0
59	University of California—Santa Cruz	16,022,387	0	12,022,387	4,000,000
60	Florida State University	15,887,907	0	15,545,348	342,559
61	University of New Mexico—Albuquerque	15,196,696	0	12,888,950	2,307,746
62	Vanderbilt University	15,070,262	0	12,899,970	2,170,292
63	University of Alaska Fairbanks	15,058,208	0	15,058,208	0

Table B.10—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
64	University of California—Riverside	14,642,718	0	14,642,718	0
65	Brown University	14,025,750	0	13,170,750	855,000
66	University of Missouri—Columbia	13,928,606	0	12,038,666	1,889,940
67	University of Illinois Chicago	13,916,592	0	11,916,592	2,000,000
68	University of Oregon	13,314,351	0	13,314,351	0
69	University of Tennessee—Knoxville	13,265,088	0	11,716,157	1,548,931
70	Louisiana State University—Baton Rouge	12,873,578	0	12,873,578	0
71	University of Kansas—Lawrence	12,833,564	0	10,207,239	2,626,325
72	Dartmouth College	12,769,471	0	8,669,911	4,099,560
73	State University of New York—Buffalo	12,754,386	0	10,640,452	2,113,934
74	Northeastern University	12,754,167	0	6,050,317	6,703,850
75	University of Delaware	12,291,582	0	12,291,582	0
76	University of Nevada Reno	12,153,256	0	12,153,256	0
77	University of Nebraska—Lincoln	11,193,675	0	8,792,966	2,400,709
78	University of Miami	11,088,708	0	11,088,708	0
79	Washington University	10,788,961	0	10,788,961	0
80	University of Connecticut—Storrs	10,722,034	0	10,722,034	0
81	University of South Carolina at Columbia	10,101,683	0	10,101,683	0
82	Florida International University	9,872,592	0	5,686,970	4,185,622
83	University of Kentucky	9,424,162	0	8,624,162	800,000
84	Kansas State University	9,369,600	0	9,369,600	0
85	Clemson University	9,072,784	0	5,044,388	4,028,396
86	University of Iowa	9,044,684	0	9,044,684	0
87	University of Oklahoma—Norman	8,784,478	0	7,247,937	1,536,541
88	University of South Florida—Tampa	8,674,378	0	8,674,378	0
89	California State University—San Diego	8,239,633	0	8,239,633	0
90	University of Wyoming	8,184,439	0	7,110,455	1,073,984
91	Drexel University	7,918,762	0	7,918,762	0
92	University of Rhode Island—Kingston	7,818,607	0	7,818,607	0
93	Lehigh University	7,642,919	0	7,642,919	0
94	Michigan Technological University	7,440,171	0	7,440,171	0
95	Georgia State University	7,404,925	0	3,448,533	3,956,392
96	Case Western Reserve University	7,385,103	0	7,385,103	0

Table B.10—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
97	College of William and Mary	6,991,412	0	6,991,412	0
98	New Jersey Institute of Technology	6,905,249	0	6,905,249	0
99	Old Dominion University	6,687,845	0	6,687,845	0
100	University of Rochester	6,620,653	0	6,620,653	0

Table B.11
The 100 Schools Receiving the Most FY 2005 Federal R&D Funds from the U.S. Department of Defense, Including Medical-School Funding

Rank	University or College	Total	Contracts	Project Grants	Other
1	Johns Hopkins University	361,228,316	350,869,094	10,310,359	48,863
2	Pennsylvania State University—University Park	92,779,033	72,278,664	18,407,112	2,093,257
3	University of Texas—Austin	84,171,633	71,110,971	8,420,946	4,639,716
4	Illinois Institute of Technology	79,498,019	77,444,019	2,054,000	0
5	University of Southern California	67,587,263	38,204,251	28,452,346	930,666
6	Massachusetts Institute of Technology	58,079,508	20,565,856	36,971,273	542,379
7	Georgia Institute of Technology	54,884,329	37,788,249	15,526,080	1,570,000
8	University of Hawaii at Manoa	46,003,742	34,400,055	8,100,001	3,503,686
9	University of Washington	39,970,226	14,487,027	24,796,849	686,350
10	Stanford University	37,223,880	6,749,325	29,961,232	513,323
11	New Mexico State University—Las Cruces	36,813,849	36,305,495	174,966	333,388
12	University of California—Los Angeles	34,342,023	2,499,800	25,450,085	6,392,138
13	University of California—San Diego	31,222,799	2,108,194	28,512,398	602,207
14	University of Pennsylvania	30,461,122	2,520,356	19,801,769	8,138,997
15	University of Pittsburgh	26,613,929	5,284,477	7,773,897	13,555,555
16	University of California—Santa Barbara	26,012,963	8,833,521	14,179,442	3,000,000
17	University of Michigan Ann Arbor	24,232,259	4,554,523	17,291,624	2,386,112
18	University of Dayton	23,428,193	22,331,593	0	1,096,600
19	Carnegie Mellon University	23,320,865	3,438,537	18,263,536	1,618,792
20	University of Illinois Urbana-Champaign	23,066,660	2,745,700	19,042,701	1,278,259
21	University of Maryland—College Park	20,972,694	2,809,936	15,153,754	3,009,004
22	Virginia Polytechnic Institute	20,907,131	9,771,323	10,435,853	699,955
23	Columbia University	19,771,448	614,308	19,007,140	150,000
24	Harvard University	19,436,117	459,197	18,976,920	0
25	University of Minnesota—Twin Cities	18,745,037	1,425,472	13,147,324	4,172,241
26	University of Texas Health Science Center Houston	18,509,307	0	2,208,639	16,300,668
27	Stevens Institute of Technology	18,231,052	8,805,174	9,425,878	0
28	University of California—Berkeley	17,068,703	2,867,504	13,961,025	240,174
29	Duke University	16,803,746	4,421,067	12,382,679	0
30	Mississippi State University	16,534,098	13,322,359	3,133,221	78,518
31	University of Delaware	15,941,522	1,208,135	7,528,887	7,204,500

Table B.11—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
32	University of California—Riverside	15,924,663	80,187	772,431	15,072,045
33	Utah State University	14,539,236	14,141,206	398,030	0
34	Georgetown University	14,417,846	462,319	13,951,507	4,020
35	Princeton University	14,241,840	122,000	14,018,981	100,859
36	Northwestern University Evanston	14,210,397	309,999	11,544,390	2,356,008
37	California Institute of Technology	14,093,500	864,818	13,079,478	149,204
38	University of Wisconsin Madison	14,074,829	819,898	11,830,931	1,424,000
39	University of Central Florida	13,650,902	9,583,835	3,200,067	867,000
40	University of Alabama at Huntsville	12,973,937	12,854,451	119,486	0
41	University of Colorado Boulder	12,708,461	703,654	12,004,807	0
42	University of Nevada Reno	12,405,901	6,140,931	5,138,629	1,126,341
43	Loma Linda University	12,303,712	0	12,303,712	0
44	Florida State University	11,726,973	4,000	8,806,862	2,916,111
45	University of Alaska Fairbanks	11,640,470	441,252	2,766,591	8,432,627
46	Purdue University	11,523,795	3,638,880	7,774,165	110,750
47	Arizona State University	11,418,056	446,433	5,160,097	5,811,526
48	University of Alabama at Birmingham	11,232,877	6,127,142	4,174,735	931,000
49	Ohio State University—Columbus	11,222,548	2,196,668	6,066,268	2,959,612
50	University of Florida	10,700,994	5,443,379	5,257,615	0
51	Texas A&M University	10,518,993	2,635,557	7,740,148	143,288
52	University of Miami	10,265,556	382,205	9,431,910	451,441
53	Wayne State University	10,146,045	7,047,480	3,098,565	0
54	North Dakota State University	9,975,000	0	7,355,000	2,620,000
55	Clemson University	9,782,611	1,225,915	8,456,718	99,978
56	University of Texas MD Anderson Cancer Center	9,647,640	0	994,640	8,653,000
57	University of North Carolina at Charlotte	9,373,230	181,895	291,335	8,900,000
58	University of California—San Francisco	9,229,185	237,512	8,991,673	0
59	Mayo Medical School	9,109,900	4,261,513	3,825,000	1,023,387
60	University of New Mexico—Albuquerque	9,102,371	3,283,767	5,818,604	0
61	Boston University	9,069,988	1,328,883	4,591,105	3,150,000
62	Washington State University	9,037,380	2,196,478	6,840,902	0
63	University of Maine Orono	8,935,790	6,446,400	2,489,390	0
64	Mount Sinai School of Medicine	8,840,969	0	8,840,969	0

Table B.11—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
65	University of Virginia	8,683,861	416,114	8,144,158	123,589
66	University of Mississippi	8,515,108	8,033,640	481,468	0
67	University of Connecticut—Storrs	8,509,416	448,531	8,060,885	0
68	North Carolina State University	8,493,023	1,587,311	6,111,140	794,572
69	University of South Florida—Tampa	8,421,963	2,896,548	5,263,417	261,998
70	Cornell University	8,393,554	1,242,332	7,096,172	55,050
71	South Dakota School of Mines and Technology	8,158,239	986,767	796,472	6,375,000
72	Vanderbilt University	7,976,873	1,039,361	6,666,512	271,000
73	New Mexico Institute of Mining and Technology	7,933,376	197,553	64,198	7,671,625
74	Oregon State University	7,788,062	1,055,474	6,439,455	293,133
75	University of Arizona	7,482,299	1,306,280	6,151,332	24,687
76	New York University	7,480,067	0	7,480,067	0
77	Brown University	7,123,381	2,132,222	4,991,159	0
78	University of Massachusetts Amherst	7,106,769	1,553,307	4,680,108	873,354
79	George Mason University	7,080,982	4,954,818	2,000,164	126,000
80	University of Notre Dame	6,752,111	214,117	6,537,994	0
81	Colorado State University—Fort Collins	6,718,909	791,978	2,495,517	3,431,414
82	University of Illinois Chicago	6,664,139	29,300	3,481,873	3,152,966
83	University of Nebraska—Lincoln	6,647,830	334,900	4,810,930	1,502,000
84	Oklahoma State University—Stillwater	6,639,516	6,110,264	529,252	0
85	Louisiana State University—Baton Rouge	6,575,994	956,809	560,078	5,059,107
86	University of Iowa	6,400,936	2,437,338	3,963,598	0
87	University of Louisville	6,330,262	4,330,830	899,432	1,100,000
88	New School for Social Research	5,932,195	5,932,195	0	0
89	Rice University	5,888,632	408,375	5,453,452	26,805
90	University of North Carolina at Chapel Hill	5,874,759	1,265,003	3,331,556	1,278,200
91	Florida International University	5,817,176	2,349,794	3,467,382	0
92	University of Rochester	5,806,609	130,000	5,526,609	150,000
93	Boston College	5,752,812	5,442,594	310,218	0
94	Drexel University	5,729,473	507,500	4,728,517	493,456
95	California State University—California Polytechnic State University San Luis Obispo	5,597,302	0	5,597,302	0

Table B.11—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
96	Rutgers, the State University of New Jersey—New Brunswick	5,584,109	1,107,514	4,086,595	390,000
97	Jackson State University	5,481,423	3,954,924	452,499	1,074,000
98	Oregon Health and Science University	5,231,559	588,237	4,643,322	0
99	Florida A&M University	5,067,177	3,813,240	576,080	677,857
100	Auburn University	4,960,828	4,357,002	603,826	0

Table B.12
The 100 Schools Receiving the Most FY 2005 Federal R&D Funds from the U.S. Department of Defense, Excluding Medical-School Funding

Rank	University or College	Total	Contracts	Project Grants	Other
1	Johns Hopkins University	361,228,316	350,869,094	10,310,359	48,863
2	Pennsylvania State University—University Park	92,779,033	72,278,664	18,407,112	2,093,257
3	University of Texas—Austin	84,171,633	71,110,971	8,420,946	4,639,716
4	Illinois Institute of Technology	79,498,019	77,444,019	2,054,000	0
5	University of Southern California	67,587,263	38,204,251	28,452,346	930,666
6	Massachusetts Institute of Technology	58,079,508	20,565,856	36,971,273	542,379
7	Georgia Institute of Technology	54,884,329	37,788,249	15,526,080	1,570,000
8	University of Hawaii at Manoa	46,003,742	34,400,055	8,100,001	3,503,686
9	University of Washington	39,970,226	14,487,027	24,796,849	686,350
10	Stanford University	37,223,880	6,749,325	29,961,232	513,323
11	New Mexico State University—Las Cruces	36,813,849	36,305,495	174,966	333,388
12	University of California—Los Angeles	34,342,023	2,499,800	25,450,085	6,392,138
13	University of California—San Diego	31,222,799	2,108,194	28,512,398	602,207
14	University of Pennsylvania	30,461,122	2,520,356	19,801,769	8,138,997
15	University of California—Santa Barbara	26,012,963	8,833,521	14,179,442	3,000,000
16	University of Michigan Ann Arbor	24,232,259	4,554,523	17,291,624	2,386,112
17	University of Dayton	23,428,193	22,331,593	0	1,096,600
18	Carnegie Mellon University	23,320,865	3,438,537	18,263,536	1,618,792
19	University of Illinois Urbana-Champaign	23,066,660	2,745,700	19,042,701	1,278,259
20	University of Maryland—College Park	20,972,694	2,809,936	15,153,754	3,009,004
21	Virginia Polytechnic Institute	20,907,131	9,771,323	10,435,853	699,955
22	Columbia University	19,771,448	614,308	19,007,140	150,000
23	Harvard University	19,436,117	459,197	18,976,920	0
24	University of Minnesota—Twin Cities	18,745,037	1,425,472	13,147,324	4,172,241
25	Stevens Institute of Technology	18,231,052	8,805,174	9,425,878	0
26	University of California—Berkeley	17,068,703	2,867,504	13,961,025	240,174
27	Duke University	16,803,746	4,421,067	12,382,679	0
28	University of Pittsburgh	16,598,374	5,284,477	7,773,897	3,540,000
29	Mississippi State University	16,534,098	13,322,359	3,133,221	78,518
30	University of Delaware	15,941,522	1,208,135	7,528,887	7,204,500
31	University of California—Riverside	15,924,663	80,187	772,431	15,072,045

Table B.12—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
32	Utah State University	14,539,236	14,141,206	398,030	0
33	Georgetown University	14,417,846	462,319	13,951,507	4,020
34	Princeton University	14,241,840	122,000	14,018,981	100,859
35	California Institute of Technology	14,093,500	864,818	13,079,478	149,204
36	Northwestern University Evanston	14,080,397	179,999	11,544,390	2,356,008
37	University of Wisconsin Madison	14,074,829	819,898	11,830,931	1,424,000
38	University of Central Florida	13,650,902	9,583,835	3,200,067	867,000
39	University of Alabama at Huntsville	12,973,937	12,854,451	119,486	0
40	University of Colorado Boulder	12,708,461	703,654	12,004,807	0
41	University of Nevada Reno	12,405,901	6,140,931	5,138,629	1,126,341
42	Florida State University	11,726,973	4,000	8,806,862	2,916,111
43	University of Alaska Fairbanks	11,640,470	441,252	2,766,591	8,432,627
44	Purdue University	11,523,795	3,638,880	7,774,165	110,750
45	Arizona State University	11,418,056	446,433	5,160,097	5,811,526
46	University of Alabama at Birmingham	11,232,877	6,127,142	4,174,735	931,000
47	Ohio State University—Columbus	11,222,548	2,196,668	6,066,268	2,959,612
48	University of Florida	10,700,994	5,443,379	5,257,615	0
49	Texas A&M University	10,518,993	2,635,557	7,740,148	143,288
50	University of Miami	10,265,556	382,205	9,431,910	451,441
51	Wayne State University	10,146,045	7,047,480	3,098,565	0
52	North Dakota State University	9,975,000	0	7,355,000	2,620,000
53	Clemson University	9,782,611	1,225,915	8,456,718	99,978
54	University of Texas MD Anderson Cancer Center	9,647,640	0	994,640	8,653,000
55	University of North Carolina at Charlotte	9,373,230	181,895	291,335	8,900,000
56	University of California—San Francisco	9,229,185	237,512	8,991,673	0
57	University of New Mexico—Albuquerque	9,102,371	3,283,767	5,818,604	0
58	Boston University	9,069,988	1,328,883	4,591,105	3,150,000
59	Washington State University	9,037,380	2,196,478	6,840,902	0
60	University of Maine Orono	8,935,790	6,446,400	2,489,390	0
61	University of Virginia	8,683,861	416,114	8,144,158	123,589
62	University of Mississippi	8,515,108	8,033,640	481,468	0
63	North Carolina State University	8,493,023	1,587,311	6,111,140	794,572
64	University of South Florida—Tampa	8,421,963	2,896,548	5,263,417	261,998

Table B.12—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
65	South Dakota School of Mines and Technology	8,158,239	986,767	796,472	6,375,000
66	Vanderbilt University	7,976,873	1,039,361	6,666,512	271,000
67	New Mexico Institute of Mining and Technology	7,933,376	197,553	64,198	7,671,625
68	Oregon State University	7,788,062	1,055,474	6,439,455	293,133
69	University of Arizona	7,482,299	1,306,280	6,151,332	24,687
70	New York University	7,480,067	0	7,480,067	0
71	Cornell University	7,435,184	1,242,332	6,137,802	55,050
72	Brown University	7,123,381	2,132,222	4,991,159	0
73	University of Massachusetts Amherst	7,106,769	1,553,307	4,680,108	873,354
74	George Mason University	7,080,982	4,954,818	2,000,164	126,000
75	University of Notre Dame	6,752,111	214,117	6,537,994	0
76	Colorado State University—Fort Collins	6,718,909	791,978	2,495,517	3,431,414
77	University of Illinois Chicago	6,664,139	29,300	3,481,873	3,152,966
78	University of Nebraska—Lincoln	6,647,830	334,900	4,810,930	1,502,000
79	Oklahoma State University—Stillwater	6,639,516	6,110,264	529,252	0
80	Louisiana State University—Baton Rouge	6,575,994	956,809	560,078	5,059,107
81	University of Iowa	6,400,936	2,437,338	3,963,598	0
82	University of Louisville	6,330,262	4,330,830	899,432	1,100,000
83	New School for Social Research	5,932,195	5,932,195	0	0
84	Rice University	5,888,632	408,375	5,453,452	26,805
85	University of North Carolina at Chapel Hill	5,874,759	1,265,003	3,331,556	1,278,200
86	Florida International University	5,817,176	2,349,794	3,467,382	0
87	University of Rochester	5,806,609	130,000	5,526,609	150,000
88	Boston College	5,752,812	5,442,594	310,218	0
89	Drexel University	5,729,473	507,500	4,728,517	493,456
90	California State University—California Polytechnic State University San Luis Obispo	5,597,302	0	5,597,302	0
91	Rutgers, the State University of New Jersey—New Brunswick	5,584,109	1,107,514	4,086,595	390,000
92	Jackson State University	5,481,423	3,954,924	452,499	1,074,000
93	Oregon Health and Science University	5,231,559	588,237	4,643,322	0
94	Florida A&M University	5,067,177	3,813,240	576,080	677,857

Table B.12—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
95	Auburn University	4,960,828	4,357,002	603,826	0
96	University of Rhode Island—Kingston	4,930,476	341,929	4,588,547	0
97	Michigan Technological University	4,769,035	3,546,722	362,313	860,000
98	University of Missouri—Rolla	4,677,369	4,630,952	46,417	0
99	University of North Carolina at Greensboro	4,669,620	0	4,669,620	0
100	Florida Atlantic University	4,603,025	929,967	3,673,058	0

Table B.13
The 100 Schools Receiving the Most FY 2005 Federal R&D Funds from the U.S. Department of Energy, Including Medical-School Funding

Rank	University or College	Total	Contracts	Project Grants	Other
1	University of Rochester	76,397,791	0	4,817,291	71,580,500
2	Massachusetts Institute of Technology	63,171,606	200,000	20,402,953	42,568,653
3	University of Nevada Reno	32,250,207	7,598,480	15,398,707	9,253,020
4	University of Wisconsin Madison	27,075,330	0	25,994,829	1,080,501
5	Stanford University	19,257,112	0	9,957,839	9,299,273
6	University of Texas—Austin	19,148,893	952,260	10,612,951	7,583,682
7	University of Illinois Urbana-Champaign	18,106,030	0	14,569,230	3,536,800
8	Pennsylvania State University—University Park	17,263,524	0	9,604,838	7,658,686
9	University of North Dakota	17,216,512	0	1,488,436	15,728,076
10	University of Washington	17,014,988	0	15,373,255	1,641,733
11	California State University—Los Angeles	16,002,077	0	10,040,453	5,961,624
12	California Institute of Technology	15,637,871	0	14,034,514	1,603,357
13	University of Nevada Las Vegas	15,454,233	0	9,953,731	5,500,502
14	University of Michigan Ann Arbor	14,332,374	0	10,412,770	3,919,604
15	University of Georgia—Athens	14,306,602	0	5,760,697	8,545,905
16	Columbia University	13,716,564	0	13,466,564	250,000
17	University of California—San Diego	12,876,889	0	11,747,057	1,129,832
18	Michigan State University	11,395,257	0	10,174,066	1,221,191
19	Texas A&M University	10,956,775	-1,859	8,079,373	2,879,261
20	Harvard University	10,486,063	0	10,486,063	0
21	Montana State University—Bozeman	9,376,878	0	26,996	9,349,882
22	Ohio State University—Columbus	9,358,316	0	8,454,033	904,283
23	Yale University	9,239,775	0	9,239,775	0
24	University of Pennsylvania	9,143,362	0	8,541,362	602,000
25	Florida State University	9,055,185	0	7,507,000	1,548,185
26	Cornell University	8,967,814	0	4,867,814	4,100,000
27	University of Maryland—College Park	8,713,769	0	8,438,769	275,000
28	University of California System	8,476,000	0	0	8,476,000
29	University of Massachusetts Amherst	8,436,847	0	4,482,577	3,954,270
30	Purdue University	8,315,256	0	8,073,432	241,824
31	Washington State University	8,279,169	0	8,238,995	40,174

Table B.13—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
32	Florida International University	8,243,666	0	8,243,666	0
33	University of Notre Dame	8,115,492	0	3,915,492	4,200,000
34	University of California—Irvine	8,052,729	0	7,329,703	723,026
35	Georgia Institute of Technology	7,686,773	0	5,257,926	2,428,847
36	University of California—Davis	7,665,121	0	6,600,612	1,064,509
37	University of Tennessee—Knoxville	7,663,633	0	6,866,293	797,340
38	Duke University	7,561,563	0	7,496,563	65,000
39	University of Florida	7,429,280	0	5,792,628	1,636,652
40	University of California—Santa Barbara	7,359,879	0	7,215,979	143,900
41	University of Utah	7,317,184	0	4,890,360	2,426,824
42	University of California—Berkeley	7,272,116	0	6,945,306	326,810
43	University of Colorado Boulder	7,240,305	0	6,457,069	783,236
44	Princeton University	7,209,638	0	7,034,620	175,018
45	Northwestern University Evanston	7,009,751	0	6,729,751	280,000
46	University of Minnesota—Twin Cities	6,931,947	0	6,557,670	374,277
47	New Mexico State University—Las Cruces	6,455,153	0	495,153	5,960,000
48	University of Southern California	6,321,466	0	5,232,906	1,088,560
49	Oregon State University	6,014,744	0	5,623,613	391,131
50	Carnegie Mellon University	5,902,533	437,988	4,027,601	1,436,944
51	New Mexico Institute of Mining and Technology	5,779,870	0	278,172	5,501,698
52	Louisiana State University—Baton Rouge	5,773,761	0	5,071,971	701,790
53	Colorado State University—Fort Collins	5,644,366	0	4,376,834	1,267,532
54	Virginia Polytechnic Institute	5,592,870	0	1,624,492	3,968,378
55	Mississippi State University	5,446,266	0	4,330,000	1,116,266
56	North Carolina State University	5,302,832	0	4,544,832	758,000
57	Clemson University	5,056,702	0	988,744	4,067,958
58	University of Kentucky	4,966,978	0	1,228,550	3,738,428
59	Kansas State University	4,962,317	0	4,564,855	397,462
60	University of Chicago	4,762,068	0	4,762,068	0
61	Michigan Technological University	4,487,048	0	3,643,529	843,519
62	Indiana University Bloomington	4,378,707	0	3,959,221	419,486
63	University of Virginia	4,216,389	0	4,216,389	0
64	Boston University	4,216,202	0	3,271,526	944,676

Table B.13—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
65	University of Kansas—Lawrence	4,210,257	0	1,598,664	2,611,593
66	George Mason University	4,148,274	0	560,274	3,588,000
67	Rutgers, the State University of New Jersey—New Brunswick	4,116,386	0	2,243,867	1,872,519
68	West Virginia University	4,097,239	-44,513	479,544	3,662,208
69	University of Louisville	4,009,338	0	4,009,338	0
70	Washington University	3,954,716	0	3,954,716	0
71	University of Arizona	3,914,517	0	3,528,407	386,110
72	Johns Hopkins University	3,906,232	0	3,906,232	0
73	State University of New York—Albany	3,844,399	0	3,844,399	0
74	University of South Carolina at Columbia	3,829,175	-49,492	1,494,667	2,384,000
75	University of Missouri—Columbia	3,806,049	0	3,806,049	0
76	South Carolina Universities Research and Education Foundation	3,702,893	0	3,176,505	526,388
77	Idaho State University	3,702,269	0	3,702,269	0
78	University of North Carolina at Chapel Hill	3,676,918	0	2,997,124	679,794
79	Brown University	3,663,578	0	3,063,578	600,000
80	University of New Mexico—Albuquerque	3,600,975	0	3,600,975	0
81	University of California—Los Angeles	3,539,507	0	2,812,507	727,000
82	University of California—Riverside	3,451,723	0	3,451,723	0
83	University of Pittsburgh	3,445,718	0	2,396,031	1,049,687
84	University of California—Santa Cruz	3,269,772	0	2,979,772	290,000
85	University of Central Florida	3,174,626	0	64,626	3,110,000
86	University of South Florida—Tampa	3,142,546	0	166,546	2,976,000
87	University of Hawaii at Manoa	3,056,182	0	1,841,626	1,214,556
88	University of Oregon	3,045,032	0	3,045,032	0
89	Iowa State University	3,005,233	0	2,814,233	191,000
90	Rice University	2,975,143	0	2,016,534	958,609
91	University of Delaware	2,966,440	0	2,497,945	468,495
92	University of Texas Southwestern Medical Center Dallas	2,916,000	0	2,916,000	0
93	University of Illinois Chicago	2,914,386	0	2,072,386	842,000
94	Rensselaer Polytechnic Institute	2,897,982	0	2,378,982	519,000
95	State University of New York—Stony Brook	2,744,194	0	2,139,194	605,000

Table B.13—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
96	New York University	2,713,091	0	2,321,058	392,033
97	Ohio University—Athens	2,651,363	0	2,600,586	50,777
98	University of Houston	2,633,150	0	2,212,755	420,395
99	University of Alaska Fairbanks	2,544,660	0	230,000	2,314,660
100	Colorado School of Mines	2,464,290	0	1,029,347	1,434,943

Table B.14
The 100 Schools Receiving the Most FY 2005 Federal R&D Funds from the U.S. Department of Energy, Excluding Medical-School Funding

Rank	University or College	Total	Contracts	Project Grants	Other
1	University of Rochester	76,397,791	0	4,817,291	71,580,500
2	Massachusetts Institute of Technology	63,171,606	200,000	20,402,953	42,568,653
3	University of Nevada Reno	31,527,207	7,598,480	15,398,707	8,530,020
4	University of Wisconsin Madison	27,075,330	0	25,994,829	1,080,501
5	Stanford University	19,257,112	0	9,957,839	9,299,273
6	University of Texas—Austin	19,148,893	952,260	10,612,951	7,583,682
7	University of Illinois Urbana-Champaign	18,106,030	0	14,569,230	3,536,800
8	Pennsylvania State University—University Park	17,263,524	0	9,604,838	7,658,686
9	University of North Dakota	17,216,512	0	1,488,436	15,728,076
10	University of Washington	17,014,988	0	15,373,255	1,641,733
11	California State University—Los Angeles	16,002,077	0	10,040,453	5,961,624
12	California Institute of Technology	15,637,871	0	14,034,514	1,603,357
13	University of Nevada Las Vegas	15,454,233	0	9,953,731	5,500,502
14	University of Michigan Ann Arbor	14,332,374	0	10,412,770	3,919,604
15	University of Georgia—Athens	14,306,602	0	5,760,697	8,545,905
16	Columbia University	13,716,564	0	13,466,564	250,000
17	University of California—San Diego	12,876,889	0	11,747,057	1,129,832
18	Michigan State University	11,395,257	0	10,174,066	1,221,191
19	Texas A&M University	10,956,775	-1,859	8,079,373	2,879,261
20	Harvard University	10,486,063	0	10,486,063	0
21	Montana State University—Bozeman	9,376,878	0	26,996	9,349,882
22	Ohio State University—Columbus	9,358,316	0	8,454,033	904,283
23	Yale University	9,239,775	0	9,239,775	0
24	University of Pennsylvania	9,143,362	0	8,541,362	602,000
25	Florida State University	9,055,185	0	7,507,000	1,548,185
26	Cornell University	8,967,814	0	4,867,814	4,100,000
27	University of Maryland—College Park	8,713,769	0	8,438,769	275,000
28	University of California System	8,476,000	0	0	8,476,000
29	University of Massachusetts Amherst	8,436,847	0	4,482,577	3,954,270
30	Purdue University	8,315,256	0	8,073,432	241,824
31	Washington State University	8,279,169	0	8,238,995	40,174

Table B.14—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
32	Florida International University	8,243,666	0	8,243,666	0
33	University of Notre Dame	8,115,492	0	3,915,492	4,200,000
34	University of California—Irvine	8,052,729	0	7,329,703	723,026
35	Georgia Institute of Technology	7,686,773	0	5,257,926	2,428,847
36	University of California—Davis	7,665,121	0	6,600,612	1,064,509
37	University of Tennessee—Knoxville	7,663,633	0	6,866,293	797,340
38	Duke University	7,561,563	0	7,496,563	65,000
39	University of Florida	7,429,280	0	5,792,628	1,636,652
40	University of California—Santa Barbara	7,359,879	0	7,215,979	143,900
41	University of Utah	7,317,184	0	4,890,360	2,426,824
42	University of California—Berkeley	7,272,116	0	6,945,306	326,810
43	University of Colorado Boulder	7,240,305	0	6,457,069	783,236
44	Princeton University	7,209,638	0	7,034,620	175,018
45	Northwestern University Evanston	7,009,751	0	6,729,751	280,000
46	University of Minnesota—Twin Cities	6,931,947	0	6,557,670	374,277
47	New Mexico State University—Las Cruces	6,455,153	0	495,153	5,960,000
48	University of Southern California	6,321,466	0	5,232,906	1,088,560
49	Oregon State University	6,014,744	0	5,623,613	391,131
50	Carnegie Mellon University	5,902,533	437,988	4,027,601	1,436,944
51	New Mexico Institute of Mining and Technology	5,779,870	0	278,172	5,501,698
52	Louisiana State University—Baton Rouge	5,773,761	0	5,071,971	701,790
53	Colorado State University—Fort Collins	5,644,366	0	4,376,834	1,267,532
54	Virginia Polytechnic Institute	5,592,870	0	1,624,492	3,968,378
55	Mississippi State University	5,446,266	0	4,330,000	1,116,266
56	North Carolina State University	5,302,832	0	4,544,832	758,000
57	Clemson University	5,056,702	0	988,744	4,067,958
58	University of Kentucky	4,966,978	0	1,228,550	3,738,428
59	Kansas State University	4,962,317	0	4,564,855	397,462
60	University of Chicago	4,762,068	0	4,762,068	0
61	Michigan Technological University	4,487,048	0	3,643,529	843,519
62	Indiana University Bloomington	4,378,707	0	3,959,221	419,486
63	University of Virginia	4,216,389	0	4,216,389	0
64	Boston University	4,216,202	0	3,271,526	944,676

Table B.14—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
65	University of Kansas—Lawrence	4,210,257	0	1,598,664	2,611,593
66	George Mason University	4,148,274	0	560,274	3,588,000
67	Rutgers, the State University of New Jersey—New Brunswick	4,116,386	0	2,243,867	1,872,519
68	West Virginia University	4,097,239	-44,513	479,544	3,662,208
69	University of Louisville	4,009,338	0	4,009,338	0
70	Washington University	3,954,716	0	3,954,716	0
71	University of Arizona	3,914,517	0	3,528,407	386,110
72	Johns Hopkins University	3,906,232	0	3,906,232	0
73	State University of New York—Albany	3,844,399	0	3,844,399	0
74	University of South Carolina at Columbia	3,829,175	-49,492	1,494,667	2,384,000
75	University of Missouri—Columbia	3,806,049	0	3,806,049	0
76	South Carolina Universities Research and Education Foundation	3,702,893	0	3,176,505	526,388
77	Idaho State University	3,702,269	0	3,702,269	0
78	University of North Carolina at Chapel Hill	3,676,918	0	2,997,124	679,794
79	Brown University	3,663,578	0	3,063,578	600,000
80	University of New Mexico—Albuquerque	3,600,975	0	3,600,975	0
81	University of California—Los Angeles	3,539,507	0	2,812,507	727,000
82	University of California—Riverside	3,451,723	0	3,451,723	0
83	University of Pittsburgh	3,445,718	0	2,396,031	1,049,687
84	University of California—Santa Cruz	3,269,772	0	2,979,772	290,000
85	University of Central Florida	3,174,626	0	64,626	3,110,000
86	University of South Florida—Tampa	3,142,546	0	166,546	2,976,000
87	University of Hawaii at Manoa	3,056,182	0	1,841,626	1,214,556
88	University of Oregon	3,045,032	0	3,045,032	0
89	Iowa State University	3,005,233	0	2,814,233	191,000
90	Rice University	2,975,143	0	2,016,534	958,609
91	University of Delaware	2,966,440	0	2,497,945	468,495
92	University of Illinois Chicago	2,914,386	0	2,072,386	842,000
93	Rensselaer Polytechnic Institute	2,897,982	0	2,378,982	519,000
94	State University of New York—Stony Brook	2,744,194	0	2,139,194	605,000
95	Ohio University—Athens	2,651,363	0	2,600,586	50,777

Table B.14—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
96	University of Houston	2,633,150	0	2,212,755	420,395
97	University of Alaska Fairbanks	2,544,660	0	230,000	2,314,660
98	New York University	2,540,538	0	2,148,505	392,033
99	Colorado School of Mines	2,464,290	0	1,029,347	1,434,943
100	City University of New York System	2,287,756	0	964,000	1,323,756

Table B.15
The 100 Schools Receiving the Most FY 2005 Federal R&D Funds from the National Aeronautics and Space Administration, Including Medical-School Funding

Rank	University or College	Total	Contracts	Project Grants	Other
1	Johns Hopkins University	146,727,514	131,642,293	13,513,045	1,572,176
2	Stanford University	62,586,666	53,432,793	6,473,487	2,680,386
3	University of California—Berkeley	55,057,425	40,156,368	11,269,977	3,631,080
4	Massachusetts Institute of Technology	47,890,704	35,608,149	10,690,108	1,592,447
5	University of Arizona	36,341,466	30,406,108	5,583,813	351,545
6	Hampton University	32,065,499	28,470,883	1,682,790	1,911,826
7	University of Colorado Boulder	28,436,834	15,834,492	10,035,671	2,566,671
8	University of Maryland—College Park	27,868,880	3,031,448	14,851,704	9,985,728
9	University of Maryland—Baltimore County	22,302,164	138,911	2,433,818	19,729,435
10	University of California—Santa Cruz	21,344,380	19,146,407	1,501,194	696,779
11	Oklahoma State University—Stillwater	13,161,264	0	180,626	12,980,638
12	Georgia Institute of Technology	12,704,623	3,451,000	6,223,960	3,029,663
13	University of Alabama at Huntsville	12,683,693	350,000	2,219,691	10,114,002
14	California Institute of Technology	12,052,816	1,601,850	10,293,966	157,000
15	George Mason University	11,968,188	0	3,366,149	8,602,039
16	Texas A&M University	11,647,179	64,115	963,999	10,619,065
17	Colorado State University—Fort Collins	10,430,068	3,986,241	5,808,882	634,945
18	University of Alabama at Birmingham	10,140,043	6,131,082	597,396	3,411,565
19	Columbia University	9,594,276	327,550	3,993,669	5,273,057
20	University of Hawaii at Manoa	9,544,850	0	6,073,774	3,471,076
21	Pennsylvania State University—University Park	9,420,291	4,714,057	4,664,976	41,258
22	University of Michigan Ann Arbor	9,368,149	-7,803	7,994,007	1,381,945
23	University of Florida	8,727,399	63,000	5,135,398	3,529,001
24	Loma Linda University	8,562,049	0	3,149,914	5,412,135
25	University of Texas—Austin	8,512,692	4,223,422	3,877,141	412,129
26	University of Wisconsin Madison	8,462,717	1,364,391	4,029,466	3,068,860
27	University of California—Los Angeles	8,379,406	772,847	5,321,309	2,285,250
28	Princeton University	8,202,436	191,229	3,132,437	4,878,770
29	Ohio State University—Columbus	8,077,063	46,000	3,411,063	4,620,000
30	University of Toledo	7,775,461	0	1,052,726	6,722,735
31	California State University—San Jose	7,685,540	0	285,442	7,400,098

Table B.15—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
32	University of Washington	7,623,792	645,739	5,382,794	1,595,259
33	Purdue University	7,078,313	0	3,906,971	3,171,342
34	Wheeling Jesuit University	6,987,080	0	1,780,923	5,206,157
35	University of California—San Diego	6,820,764	350,000	5,469,703	1,001,061
36	University of Central Florida	6,671,435	172,000	6,499,435	0
37	University of New Hampshire Durham	6,652,162	1,437,186	4,911,193	303,783
38	University of Hawaii at Hilo	6,491,026	0	6,491,026	0
39	Boston University	6,444,787	3,552,463	2,510,004	382,320
40	Washington University	5,265,850	0	4,527,830	738,020
41	Capitol College	5,022,383	0	5,022,383	0
42	Morgan State University	4,902,660	0	240,381	4,662,279
43	University of California—Santa Barbara	4,887,699	405,868	3,402,479	1,079,352
44	University of Illinois Urbana-Champaign	4,732,727	642,000	2,915,247	1,175,480
45	Case Western Reserve University	4,417,697	308,075	1,459,826	2,649,796
46	University of Minnesota—Twin Cities	4,310,825	1,125,720	2,751,172	433,933
47	University of Idaho	4,099,566	0	4,099,566	0
48	Utah State University	4,097,136	2,242,852	1,780,029	74,255
49	Northwestern University Evanston	4,031,210	2,384,473	1,629,436	17,301
50	Saint Bonaventure University	3,968,000	0	3,968,000	0
51	City University of New York—City College	3,895,612	0	3,895,612	0
52	Cleveland State University	3,839,829	491,000	1,232,452	2,116,377
53	Oregon State University	3,820,707	1,795,000	2,022,307	3,400
54	Carnegie Mellon University	3,653,189	0	2,883,186	770,003
55	University of New Mexico—Albuquerque	3,641,575	0	3,041,689	599,886
56	University of California—Irvine	3,594,474	195,104	3,183,862	215,508
57	Bowie State University	3,549,688	0	3,555,370	-5,682
58	Rice University	3,546,749	1,498,572	1,579,766	468,411
59	University of North Dakota	3,440,414	0	1,806,413	1,634,001
60	Montana State University—Bozeman	3,402,311	0	2,827,428	574,883
61	Colorado School of Mines	3,347,784	845,000	160,000	2,342,784
62	Cornell University	3,330,624	0	2,907,300	423,324
63	Southern University—Baton Rouge	3,276,751	0	232,015	3,044,736
64	Old Dominion University	3,257,124	482,000	1,052,634	1,722,490

Table B.15—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
65	University of California—Davis	3,230,262	0	2,431,244	799,018
66	Harvard University	3,196,138	525,682	2,444,176	226,280
67	University of Southern California	3,162,266	917,825	1,452,408	792,033
68	Brown University	3,040,382	201,300	2,839,082	0
69	University of Maryland—Baltimore	2,963,198	268,976	2,694,222	0
70	University of Miami	2,941,188	1,084,900	1,681,923	174,365
71	Arizona State University	2,892,615	148,831	2,673,784	70,000
72	University of Iowa	2,888,664	0	2,888,664	0
73	California State University—Monterey Bay	2,776,836	0	0	2,776,836
74	University of California System	2,774,900	0	0	2,774,900
75	Catholic University of America	2,606,361	0	2,164,847	441,514
76	University of South Carolina at Columbia	2,500,464	0	2,400,580	99,884
77	Michigan State University	2,294,937	0	1,186,079	1,108,858
78	University of Louisville	2,291,634	0	2,303,737	-12,103
79	University of California—Riverside	2,196,207	0	2,196,207	0
80	Tuskegee University	2,193,147	0	58,917	2,134,230
81	Florida Atlantic University	2,188,815	0	156,434	2,032,381
82	Virginia Commonwealth University	2,104,528	0	1,253,251	851,277
83	Morehouse College	2,079,364	0	100,000	1,979,364
84	Norfolk State University	2,045,235	0	578,023	1,467,212
85	University of Pennsylvania	2,028,708	0	1,511,646	517,062
86	Rutgers, the State University of New Jersey—New Brunswick	1,990,133	380,000	1,610,133	0
87	Duke University	1,982,237	0	1,808,409	173,828
88	University of Houston	1,940,804	0	1,189,804	751,000
89	University of North Carolina at Chapel Hill	1,885,250	0	1,564,532	320,718
90	Texas Tech University	1,869,000	0	1,869,000	0
91	University of Montana—Missoula	1,867,133	320,864	150,588	1,395,681
92	Southeast Missouri State University	1,854,258	0	1,854,258	0
93	Louisiana State University—Baton Rouge	1,849,589	0	1,040,659	808,930
94	University of Texas Health Science Center Houston	1,840,527	0	-143,473	1,984,000
95	Iowa State University	1,764,325	0	670,772	1,093,553

Table B.15—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
96	University of Missouri—Rolla	1,742,882	0	49,368	1,693,514
97	Auburn University	1,740,312	6,000	700,531	1,033,781
98	University of Rhode Island—Kingston	1,737,291	0	346,432	1,390,859
99	University of Akron	1,730,180	573,700	189,438	967,042
100	Tulane University	1,727,524	0	446,813	1,280,711

Table B.16
The 100 Schools Receiving the Most FY 2005 Federal R&D Funds from the National Aeronautics and Space Administration, Excluding Medical-School Funding

Rank	University or College	Total	Contracts	Project Grants	Other
1	Johns Hopkins University	146,727,514	131,642,293	13,513,045	1,572,176
2	Stanford University	62,586,666	53,432,793	6,473,487	2,680,386
3	University of California—Berkeley	55,057,425	40,156,368	11,269,977	3,631,080
4	Massachusetts Institute of Technology	47,890,704	35,608,149	10,690,108	1,592,447
5	University of Arizona	36,341,466	30,406,108	5,583,813	351,545
6	Hampton University	32,065,499	28,470,883	1,682,790	1,911,826
7	University of Colorado Boulder	28,436,834	15,834,492	10,035,671	2,566,671
8	University of Maryland—College Park	27,868,880	3,031,448	14,851,704	9,985,728
9	University of Maryland—Baltimore County	22,302,164	138,911	2,433,818	19,729,435
10	University of California—Santa Cruz	21,344,380	19,146,407	1,501,194	696,779
11	Oklahoma State University—Stillwater	13,161,264	0	180,626	12,980,638
12	Georgia Institute of Technology	12,704,623	3,451,000	6,223,960	3,029,663
13	University of Alabama at Huntsville	12,683,693	350,000	2,219,691	10,114,002
14	California Institute of Technology	12,052,816	1,601,850	10,293,966	157,000
15	George Mason University	11,968,188	0	3,366,149	8,602,039
16	Texas A&M University	11,647,179	64,115	963,999	10,619,065
17	Colorado State University—Fort Collins	10,430,068	3,986,241	5,808,882	634,945
18	University of Alabama at Birmingham	10,140,043	6,131,082	597,396	3,411,565
19	Columbia University	9,594,276	327,550	3,993,669	5,273,057
20	University of Hawaii at Manoa	9,544,850	0	6,073,774	3,471,076
21	Pennsylvania State University—University Park	9,420,291	4,714,057	4,664,976	41,258
22	University of Michigan Ann Arbor	9,368,149	-7,803	7,994,007	1,381,945
23	University of Florida	8,727,399	63,000	5,135,398	3,529,001
24	University of Texas—Austin	8,512,692	4,223,422	3,877,141	412,129
25	University of Wisconsin Madison	8,462,717	1,364,391	4,029,466	3,068,860
26	Princeton University	8,202,436	191,229	3,132,437	4,878,770
27	University of California—Los Angeles	8,080,595	727,847	5,067,498	2,285,250
28	Ohio State University—Columbus	8,077,063	46,000	3,411,063	4,620,000
29	University of Toledo	7,775,461	0	1,052,726	6,722,735
30	California State University—San Jose	7,685,540	0	285,442	7,400,098
31	University of Washington	7,623,792	645,739	5,382,794	1,595,259

Table B.16—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
32	Purdue University	7,078,313	0	3,906,971	3,171,342
33	Wheeling Jesuit University	6,987,080	0	1,780,923	5,206,157
34	University of California—San Diego	6,820,764	350,000	5,469,703	1,001,061
35	University of Central Florida	6,671,435	172,000	6,499,435	0
36	University of New Hampshire Durham	6,652,162	1,437,186	4,911,193	303,783
37	University of Hawaii at Hilo	6,491,026	0	6,491,026	0
38	Boston University	6,444,787	3,552,463	2,510,004	382,320
39	Capitol College	5,022,383	0	5,022,383	0
40	Washington University	4,912,408	0	4,174,388	738,020
41	Morgan State University	4,902,660	0	240,381	4,662,279
42	University of California—Santa Barbara	4,887,699	405,868	3,402,479	1,079,352
43	University of Illinois Urbana-Champaign	4,732,727	642,000	2,915,247	1,175,480
44	University of Minnesota—Twin Cities	4,310,825	1,125,720	2,751,172	433,933
45	Case Western Reserve University	4,225,235	308,075	1,359,826	2,557,334
46	University of Idaho	4,099,566	0	4,099,566	0
47	Utah State University	4,097,136	2,242,852	1,780,029	74,255
48	Northwestern University Evanston	4,031,210	2,384,473	1,629,436	17,301
49	Saint Bonaventure University	3,968,000	0	3,968,000	0
50	City University of New York—City College	3,895,612	0	3,895,612	0
51	Cleveland State University	3,839,829	491,000	1,232,452	2,116,377
52	Oregon State University	3,820,707	1,795,000	2,022,307	3,400
53	Carnegie Mellon University	3,653,189	0	2,883,186	770,003
54	University of New Mexico—Albuquerque	3,641,575	0	3,041,689	599,886
55	University of California—Irvine	3,594,474	195,104	3,183,862	215,508
56	Bowie State University	3,549,688	0	3,555,370	-5,682
57	Rice University	3,546,749	1,498,572	1,579,766	468,411
58	University of North Dakota	3,440,414	0	1,806,413	1,634,001
59	Montana State University—Bozeman	3,402,311	0	2,827,428	574,883
60	Colorado School of Mines	3,347,784	845,000	160,000	2,342,784
61	Cornell University	3,330,624	0	2,907,300	423,324
62	Southern University—Baton Rouge	3,276,751	0	232,015	3,044,736
63	Old Dominion University	3,257,124	482,000	1,052,634	1,722,490
64	University of California—Davis	3,230,262	0	2,431,244	799,018

Table B.16—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
65	Harvard University	3,196,138	525,682	2,444,176	226,280
66	University of Southern California	3,162,266	917,825	1,452,408	792,033
67	Brown University	3,040,382	201,300	2,839,082	0
68	University of Maryland—Baltimore	2,963,198	268,976	2,694,222	0
69	University of Miami	2,941,188	1,084,900	1,681,923	174,365
70	Arizona State University	2,892,615	148,831	2,673,784	70,000
71	University of Iowa	2,888,664	0	2,888,664	0
72	California State University—Monterey Bay	2,776,836	0	0	2,776,836
73	University of California System	2,774,900	0	0	2,774,900
74	Catholic University of America	2,606,361	0	2,164,847	441,514
75	University of South Carolina at Columbia	2,500,464	0	2,400,580	99,884
76	Michigan State University	2,294,937	0	1,186,079	1,108,858
77	University of Louisville	2,291,634	0	2,303,737	-12,103
78	University of California—Riverside	2,196,207	0	2,196,207	0
79	Tuskegee University	2,193,147	0	58,917	2,134,230
80	Florida Atlantic University	2,188,815	0	156,434	2,032,381
81	Virginia Commonwealth University	2,104,528	0	1,253,251	851,277
82	Norfolk State University	2,045,235	0	578,023	1,467,212
83	University of Pennsylvania	2,028,708	0	1,511,646	517,062
84	Rutgers, the State University of New Jersey—New Brunswick	1,990,133	380,000	1,610,133	0
85	Duke University	1,982,237	0	1,808,409	173,828
86	University of Houston	1,940,804	0	1,189,804	751,000
87	University of North Carolina at Chapel Hill	1,885,250	0	1,564,532	320,718
88	Texas Tech University	1,869,000	0	1,869,000	0
89	University of Montana—Missoula	1,867,133	320,864	150,588	1,395,681
90	Southeast Missouri State University	1,854,258	0	1,854,258	0
91	Louisiana State University—Baton Rouge	1,849,589	0	1,040,659	808,930
92	Iowa State University	1,764,325	0	670,772	1,093,553
93	University of Missouri—Rolla	1,742,882	0	49,368	1,693,514
94	Auburn University	1,740,312	6,000	700,531	1,033,781
95	University of Rhode Island—Kingston	1,737,291	0	346,432	1,390,859
96	University of Akron	1,730,180	573,700	189,438	967,042

Table B.16—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
97	Tulane University	1,727,524	0	446,813	1,280,711
98	University of Southern Mississippi	1,710,642	1,340,914	369,728	0
99	Rochester Institute of Technology	1,704,641	0	1,669,320	35,321
100	Spelman College	1,632,603	0	685,765	946,838

Table B.17
The 100 Schools Receiving the Most FY 2005 Federal R&D Funds from the U.S. Department of
Agriculture, Including Medical-School Funding

Rank	University or College	Total	Contracts	Project Grants	Other
1	Tufts University	143,366,882	0	752,521	142,614,361
2	Mississippi State University	41,066,837	0	6,124,579	34,942,258
3	University of Missouri—Columbia	34,251,768	0	13,247,588	21,004,180
4	Iowa State University	32,918,043	0	20,627,228	12,290,815
5	Cornell University	32,854,170	0	15,963,130	16,891,040
6	University of California—Davis	31,729,857	0	13,365,151	18,364,706
7	Michigan State University	28,207,809	0	20,581,882	7,625,927
8	Texas A&M University	24,361,322	0	8,444,112	15,917,210
9	North Carolina State University	24,032,695	0	13,881,660	10,151,035
10	University of Mississippi	22,951,767	0	330,000	22,621,767
11	Louisiana State University—Baton Rouge	20,809,791	0	2,093,462	18,716,329
12	University of Illinois Urbana-Champaign	20,485,146	0	6,522,630	13,962,516
13	University of Maryland—College Park	20,212,204	0	5,688,135	14,524,069
14	North Dakota State University	20,163,275	0	7,539,050	12,624,225
15	Purdue University	20,121,484	0	5,710,485	14,410,999
16	University of Wisconsin Madison	19,072,258	0	9,033,502	10,038,756
17	Pennsylvania State University—University Park	18,482,978	0	9,172,938	9,310,040
18	Ohio State University—Columbus	18,482,512	0	10,246,238	8,236,274
19	University of Minnesota—Twin Cities	17,900,996	0	10,878,167	7,022,829
20	University of Georgia—Athens	17,755,160	0	5,853,110	11,902,050
21	Virginia Polytechnic Institute	17,151,629	0	8,068,348	9,083,281
22	Colorado State University—Fort Collins	16,901,037	0	10,789,545	6,111,492
23	University of Alaska Fairbanks	16,874,813	0	12,342,092	4,532,721
24	Kansas State University	15,863,163	0	6,289,201	9,573,962
25	University of Florida	15,823,040	0	10,059,206	5,763,834
26	Washington State University	15,532,985	0	8,308,402	7,224,583
27	Oregon State University	15,492,338	0	7,807,984	7,684,354
28	University of Nebraska—Lincoln	15,377,774	0	4,133,538	11,244,236
29	University of Kentucky	14,297,993	0	5,155,482	9,142,511
30	New Mexico State University—Las Cruces	13,890,614	0	3,822,276	10,068,338
31	University of Arkansas Fayetteville	12,967,648	0	6,675,694	6,291,954

Table B.17—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
32	University of California—Berkeley	12,243,131	0	6,372,609	5,870,522
33	Utah State University	11,470,580	0	4,915,384	6,555,196
34	Rutgers, the State University of New Jersey—New Brunswick	11,381,019	0	8,148,183	3,232,836
35	University of Connecticut—Storrs	11,361,867	0	965,566	10,396,301
36	Johns Hopkins University	10,588,668	0	1,399,100	9,189,568
37	Auburn University	10,524,543	0	4,455,556	6,068,987
38	University of Hawaii at Manoa	10,238,756	0	4,825,187	5,413,569
39	University of Idaho	9,936,160	0	4,734,507	5,201,653
40	University of Arizona	9,772,293	8,075	5,294,799	4,469,419
41	University of Toledo	8,935,290	0	2,397,898	6,537,392
42	University of Tennessee—Knoxville	8,816,475	0	2,000,971	6,815,504
43	Florida A&M University	7,667,901	0	0	7,667,901
44	Montana State University—Bozeman	7,435,776	0	4,652,343	2,783,433
45	Clemson University	7,398,086	0	1,601,218	5,796,868
46	University of Vermont	7,081,363	0	2,558,676	4,522,687
47	West Virginia University	6,901,677	0	1,733,946	5,167,731
48	South Dakota State University	6,838,998	0	3,308,246	3,530,752
49	Baylor College of Medicine	6,592,122	8,250	5,360,000	1,223,872
50	Oklahoma State University—Stillwater	6,277,589	0	1,293,111	4,984,478
51	University of Maine Bangor	5,334,158	0	3,011,798	2,322,360
52	University of Rhode Island—Kingston	5,247,568	0	4,012,929	1,234,639
53	University of Massachusetts Amherst	5,218,312	0	2,772,263	2,446,049
54	University of Delaware	5,126,982	0	3,330,789	1,796,193
55	Texas Tech University	5,118,256	0	3,132,800	1,985,456
56	Tennessee State University	4,983,493	0	420,000	4,563,493
57	University of Puerto Rico Rio Piedras	4,912,282	0	955,952	3,956,330
58	North Carolina Agricultural and Technical State University	4,521,486	0	359,277	4,162,209
59	Alcorn State University	4,350,021	0	1,442,319	2,907,702
60	Texas A&M University—Prairie View A&M	4,013,446	0	352,599	3,660,847
61	University of California—Riverside	3,882,408	0	3,476,641	405,767
62	University of Arkansas Pine Bluff	3,721,661	0	327,748	3,393,913
63	Florida State University	3,564,427	0	3,564,427	0

Table B.17—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
64	Kentucky State University	3,464,068	0	251,375	3,212,693
65	Oklahoma State University	3,372,808	0	3,372,808	0
66	University of Wyoming	3,368,946	0	1,095,441	2,273,505
67	Fort Valley State University	3,277,356	0	200,000	3,077,356
68	Western Kentucky University	3,111,708	0	0	3,111,708
69	Alabama A&M University	2,961,200	0	100,000	2,861,200
70	Tuskegee University	2,905,049	0	0	2,905,049
71	Southern University—Baton Rouge	2,891,449	0	0	2,891,449
72	University of Southern Mississippi	2,780,806	0	1,862,317	918,489
73	University of New Hampshire Durham	2,519,857	0	804,545	1,715,312
74	University of Nevada Reno	2,514,328	0	1,102,178	1,412,150
75	West Virginia State University	2,467,956	0	607,247	1,860,709
76	Lincoln University	2,463,827	0	0	2,463,827
77	Virginia State University	2,438,170	0	95,527	2,342,643
78	University of Washington	2,206,134	0	1,228,194	977,940
79	Langston University	2,200,717	0	0	2,200,717
80	Delaware State University	1,976,404	0	525,374	1,451,030
81	South Carolina State University	1,845,588	0	0	1,845,588
82	University of Montana—Missoula	1,815,292	77,819	1,297,803	439,670
83	University of Maryland—Eastern Shore	1,784,149	0	0	1,784,149
84	University of Central Florida	1,731,367	0	0	1,731,367
85	Sul Ross State University	1,689,891	0	1,689,891	0
86	University of Hawaii at Hilo	1,585,341	0	0	1,585,341
87	Southern Illinois University Carbondale	1,560,165	0	379,606	1,180,559
88	State University of New York—Albany	1,139,555	0	404,000	735,555
89	Brigham Young University	1,018,804	0	813,461	205,343
90	University of California—Santa Barbara	1,007,825	0	1,007,825	0
91	University of Wisconsin Stevens Point	928,512	0	928,512	0
92	University of Connecticut	921,774	0	0	921,774
93	Massachusetts Institute of Technology	910,000	0	910,000	0
94	University of Michigan Ann Arbor	889,661	0	680,000	209,661
95	University of California—Los Angeles	887,020	0	887,020	0
96	University of Pittsburgh	886,212	0	886,212	0

Table B.17—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
97	University of California—Santa Cruz	869,588	0	869,588	0
98	Mississippi Valley State University	866,302	0	866,302	0
99	Mountain State University	837,206	0	0	837,206
100	Georgia State University	834,790	987	833,803	0

Table B.18
The 100 Schools Receiving the Most FY 2005 Federal R&D Funds from the U.S. Department of
Agriculture, Excluding Medical-School Funding

Rank	University or College	Total	Contracts	Project Grants	Other
1	Tufts University	143,366,882	0	752,521	142,614,361
2	Mississippi State University	41,066,837	0	6,124,579	34,942,258
3	University of Missouri—Columbia	34,251,768	0	13,247,588	21,004,180
4	Iowa State University	32,918,043	0	20,627,228	12,290,815
5	Cornell University	32,854,170	0	15,963,130	16,891,040
6	University of California—Davis	31,729,857	0	13,365,151	18,364,706
7	Michigan State University	28,207,809	0	20,581,882	7,625,927
8	Texas A&M University	24,361,322	0	8,444,112	15,917,210
9	North Carolina State University	24,032,695	0	13,881,660	10,151,035
10	University of Mississippi	22,951,767	0	330,000	22,621,767
11	Louisiana State University—Baton Rouge	20,809,791	0	2,093,462	18,716,329
12	University of Illinois Urbana-Champaign	20,485,146	0	6,522,630	13,962,516
13	University of Maryland—College Park	20,212,204	0	5,688,135	14,524,069
14	North Dakota State University	20,163,275	0	7,539,050	12,624,225
15	Purdue University	20,121,484	0	5,710,485	14,410,999
16	University of Wisconsin Madison	19,072,258	0	9,033,502	10,038,756
17	Pennsylvania State University—University Park	18,482,978	0	9,172,938	9,310,040
18	Ohio State University—Columbus	18,482,512	0	10,246,238	8,236,274
19	University of Minnesota—Twin Cities	17,900,996	0	10,878,167	7,022,829
20	University of Georgia—Athens	17,755,160	0	5,853,110	11,902,050
21	Virginia Polytechnic Institute	17,151,629	0	8,068,348	9,083,281
22	Colorado State University—Fort Collins	16,901,037	0	10,789,545	6,111,492
23	University of Alaska Fairbanks	16,874,813	0	12,342,092	4,532,721
24	Kansas State University	15,863,163	0	6,289,201	9,573,962
25	University of Florida	15,823,040	0	10,059,206	5,763,834
26	Washington State University	15,532,985	0	8,308,402	7,224,583
27	Oregon State University	15,492,338	0	7,807,984	7,684,354
28	University of Nebraska—Lincoln	15,377,774	0	4,133,538	11,244,236
29	University of Kentucky	14,297,993	0	5,155,482	9,142,511
30	New Mexico State University—Las Cruces	13,890,614	0	3,822,276	10,068,338
31	University of Arkansas Fayetteville	12,967,648	0	6,675,694	6,291,954

Table B.18—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
32	University of California—Berkeley	12,243,131	0	6,372,609	5,870,522
33	Utah State University	11,470,580	0	4,915,384	6,555,196
34	Rutgers, the State University of New Jersey—New Brunswick	11,381,019	0	8,148,183	3,232,836
35	University of Connecticut—Storrs	11,361,867	0	965,566	10,396,301
36	Johns Hopkins University	10,588,668	0	1,399,100	9,189,568
37	Auburn University	10,524,543	0	4,455,556	6,068,987
38	University of Hawaii at Manoa	10,238,756	0	4,825,187	5,413,569
39	University of Idaho	9,936,160	0	4,734,507	5,201,653
40	University of Arizona	9,772,293	8,075	5,294,799	4,469,419
41	University of Toledo	8,935,290	0	2,397,898	6,537,392
42	University of Tennessee—Knoxville	8,816,475	0	2,000,971	6,815,504
43	Florida A&M University	7,667,901	0	0	7,667,901
44	Montana State University—Bozeman	7,435,776	0	4,652,343	2,783,433
45	Clemson University	7,398,086	0	1,601,218	5,796,868
46	University of Vermont	7,081,363	0	2,558,676	4,522,687
47	West Virginia University	6,901,677	0	1,733,946	5,167,731
48	South Dakota State University	6,838,998	0	3,308,246	3,530,752
49	Oklahoma State University—Stillwater	6,277,589	0	1,293,111	4,984,478
50	University of Maine Bangor	5,334,158	0	3,011,798	2,322,360
51	University of Rhode Island—Kingston	5,247,568	0	4,012,929	1,234,639
52	University of Massachusetts Amherst	5,218,312	0	2,772,263	2,446,049
53	University of Delaware	5,126,982	0	3,330,789	1,796,193
54	Texas Tech University	5,118,256	0	3,132,800	1,985,456
55	Tennessee State University	4,983,493	0	420,000	4,563,493
56	University of Puerto Rico Rio Piedras	4,912,282	0	955,952	3,956,330
57	North Carolina Agricultural and Technical State University	4,521,486	0	359,277	4,162,209
58	Alcorn State University	4,350,021	0	1,442,319	2,907,702
59	Texas A&M University—Prairie View A&M	4,013,446	0	352,599	3,660,847
60	University of California—Riverside	3,882,408	0	3,476,641	405,767
61	University of Arkansas Pine Bluff	3,721,661	0	327,748	3,393,913
62	Florida State University	3,564,427	0	3,564,427	0
63	Kentucky State University	3,464,068	0	251,375	3,212,693

Table B.18—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
64	Oklahoma State University	3,372,808	0	3,372,808	0
65	University of Wyoming	3,368,946	0	1,095,441	2,273,505
66	Fort Valley State University	3,277,356	0	200,000	3,077,356
67	Western Kentucky University	3,111,708	0	0	3,111,708
68	Alabama A&M University	2,961,200	0	100,000	2,861,200
69	Tuskegee University	2,905,049	0	0	2,905,049
70	Southern University—Baton Rouge	2,891,449	0	0	2,891,449
71	University of Southern Mississippi	2,780,806	0	1,862,317	918,489
72	University of New Hampshire Durham	2,519,857	0	804,545	1,715,312
73	University of Nevada Reno	2,514,328	0	1,102,178	1,412,150
74	West Virginia State University	2,467,956	0	607,247	1,860,709
75	Lincoln University	2,463,827	0	0	2,463,827
76	Virginia State University	2,438,170	0	95,527	2,342,643
77	University of Washington	2,206,134	0	1,228,194	977,940
78	Langston University	2,200,717	0	0	2,200,717
79	Delaware State University	1,976,404	0	525,374	1,451,030
80	South Carolina State University	1,845,588	0	0	1,845,588
81	University of Montana—Missoula	1,815,292	77,819	1,297,803	439,670
82	University of Maryland—Eastern Shore	1,784,149	0	0	1,784,149
83	University of Central Florida	1,731,367	0	0	1,731,367
84	Sul Ross State University	1,689,891	0	1,689,891	0
85	University of Hawaii at Hilo	1,585,341	0	0	1,585,341
86	Southern Illinois University Carbondale	1,560,165	0	379,606	1,180,559
87	State University of New York—Albany	1,139,555	0	404,000	735,555
88	Brigham Young University	1,018,804	0	813,461	205,343
89	University of California—Santa Barbara	1,007,825	0	1,007,825	0
90	University of Wisconsin Stevens Point	928,512	0	928,512	0
91	University of Connecticut	921,774	0	0	921,774
92	Massachusetts Institute of Technology	910,000	0	910,000	0
93	University of Michigan Ann Arbor	889,661	0	680,000	209,661
94	University of California—Los Angeles	887,020	0	887,020	0
95	University of Pittsburgh	886,212	0	886,212	0
96	University of California—Santa Cruz	869,588	0	869,588	0

Table B.18—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
97	Mississippi Valley State University	866,302	0	866,302	0
98	Mountain State University	837,206	0	0	837,206
99	Georgia State University	834,790	987	833,803	0
100	University of North Carolina at Chapel Hill	789,184	0	425,000	364,184

Table B.19
The 100 Schools Receiving the Most FY 2005 Federal R&D Funds from the U.S. Department of Education, Including Medical-School Funding

Rank	University or College	Total	Contracts	Project Grants	Other
1	University of Minnesota—Twin Cities	11,066,648	0	6,066,651	4,999,997
2	University of Wisconsin Madison	9,085,588	0	3,665,518	5,420,070
3	University of Illinois Chicago	8,315,124	0	6,752,696	1,562,428
4	State University of New York—Buffalo	7,569,072	0	1,599,995	5,969,077
5	University of California—Berkeley	6,625,850	0	625,850	6,000,000
6	University of California—Los Angeles	6,444,218	0	694,223	5,749,995
7	University of Chicago	5,775,679	0	948,426	4,827,253
8	University of Pennsylvania	5,465,163	0	905,803	4,559,360
9	Ohio State University—Columbus	5,393,543	0	1,464,885	3,928,658
10	University of Miami	5,369,993	0	500,000	4,869,993
11	University of Houston	5,342,037	0	0	5,342,037
12	University of Kansas—Lawrence	5,063,503	726,894	4,336,609	0
13	New York University	4,995,181	0	32,620	4,962,561
14	Georgia Institute of Technology	4,626,012	0	4,626,012	0
15	Vanderbilt University	4,497,349	0	2,073,197	2,424,152
16	University of Washington	4,347,823	0	4,347,823	0
17	Harvard University	4,296,658	0	400,139	3,896,519
18	University of South Florida—Tampa	4,274,301	0	3,559,992	714,309
19	University of Virginia	4,218,905	0	219,817	3,999,088
20	University of Kentucky	4,000,000	0	4,000,000	0
21	Cornell University	3,794,059	0	3,050,547	743,512
22	University of Maryland—College Park	3,532,821	0	163,000	3,369,821
23	Texas A&M University	3,283,331	0	0	3,283,331
24	University of Massachusetts Boston	3,260,424	0	3,260,424	0
25	University of Pittsburgh	3,259,120	0	3,259,120	0
26	Boston University	3,214,867	0	1,959,842	1,255,025
27	University of Oregon	3,165,362	0	3,165,362	0
28	Oregon Health and Science University	2,790,000	0	2,790,000	0
29	University of Southern California	2,720,822	0	0	2,720,822
30	University of Nebraska—Lincoln	2,699,205	0	899,648	1,799,557
31	Johns Hopkins University	2,611,653	0	375,482	2,236,171
32	University of California—Riverside	2,593,570	0	0	2,593,570

Table B.19—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
33	University of Missouri—Columbia	2,548,432	0	2,548,432	0
34	Northwestern University Evanston	2,415,276	0	1,456,785	958,491
35	Marquette University	2,398,376	0	2,398,376	0
36	Indiana University Bloomington	2,220,734	0	621,834	1,598,900
37	University of Illinois Urbana-Champaign	2,173,912	0	673,947	1,499,965
38	Duke University	2,100,694	0	949,975	1,150,719
39	University of North Carolina at Charlotte	2,076,396	0	2,076,396	0
40	Arizona State University	1,888,427	0	269,019	1,619,408
41	University of Colorado Denver	1,834,973	5,000	1,829,973	0
42	University of Connecticut—Storrs	1,795,477	0	0	1,795,477
43	Mount Sinai School of Medicine	1,684,998	0	1,684,998	0
44	Mississippi State University	1,600,000	0	1,600,000	0
45	Virginia Commonwealth University	1,524,999	0	1,524,999	0
46	Lehigh University	1,498,368	0	1,498,368	0
47	Purdue University	1,490,693	0	0	1,490,693
48	University of Michigan Ann Arbor	1,431,797	0	1,105,188	326,609
49	Michigan State University	1,389,770	0	375,595	1,014,175
50	University of Florida	1,387,434	0	1,387,434	0
51	University of Texas—Austin	1,232,246	0	1,232,246	0
52	University of Alabama at Birmingham	1,204,891	0	1,204,891	0
53	Pennsylvania State University—University Park	1,104,161	0	0	1,104,161
54	University of Memphis	1,050,000	0	0	1,050,000
55	Kent State University—Kent	1,043,864	0	175,000	868,864
56	University of California—San Francisco	1,014,736	0	1,014,736	0
57	California State University—Northridge	1,000,000	0	1,000,000	0
58	Rochester Institute of Technology	1,000,000	0	1,000,000	0
59	University of Tennessee—Knoxville	1,000,000	0	1,000,000	0
60	University of Iowa	993,737	0	993,737	0
61	Carnegie Mellon University	993,346	0	142,000	851,346
62	University of Southern Mississippi	992,000	0	992,000	0
63	State University of New York—Albany	950,000	0	950,000	0
64	New Jersey Institute of Technology	949,700	0	949,700	0
65	Gallaudet University	949,480	0	949,480	0

Table B.19—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
66	Oregon State University	949,044	0	949,044	0
67	University of California—Davis	898,000	0	898,000	0
68	Portland State University	859,650	0	859,650	0
69	Wright State University—Dayton	767,258	0	767,258	0
70	University of North Carolina at Greensboro	764,478	764,478	0	0
71	University of North Carolina at Chapel Hill	748,412	0	748,412	0
72	City University of New York System	723,068	0	723,068	0
73	University of New Hampshire Durham	703,494	0	703,494	0
74	University of Texas Southwestern Medical Center Dallas	665,000	0	665,000	0
75	Northern Illinois University	655,536	0	80,605	574,931
76	Western Oregon University	629,966	0	629,966	0
77	Fordham University	623,390	0	0	623,390
78	University of Hawaii at Manoa	618,467	0	618,467	0
79	University of Arkansas Fayetteville	600,000	0	600,000	0
80	Texas Tech University	598,325	0	598,325	0
81	University of Texas Medical Branch Galveston	595,686	0	595,686	0
82	Daemen College	595,199	0	595,199	0
83	Southern Methodist University	586,531	0	586,531	0
84	Georgia State University	558,980	0	558,980	0
85	Thomas Jefferson University—Jefferson Medical College	549,880	0	549,880	0
86	Western Illinois University	524,998	0	524,998	0
87	Wayne State University	514,384	0	514,384	0
88	Illinois State University	495,980	0	495,980	0
89	Middle Tennessee State University	495,649	0	495,649	0
90	University of Texas—San Antonio	490,396	0	0	490,396
91	Utah State University	478,228	0	150,000	328,228
92	University of Northern Colorado	446,364	0	446,364	0
93	California State University—San Diego	443,198	0	443,198	0
94	Yale University	432,465	0	432,465	0
95	University of Arizona	380,679	0	380,679	0
96	Mayo Medical School	364,993	0	364,993	0

Table B.19—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
97	Southern University—Baton Rouge	350,000	0	350,000	0
98	Texas Southern University	349,889	0	349,889	0
99	University of Northern Iowa	330,336	0	330,336	0
100	University of Toledo	325,282	0	0	325,282

Table B.20
The 100 Schools Receiving the Most FY 2005 Federal R&D Funds from the U.S. Department of Education, Excluding Medical-School Funding

Rank	University or College	Total	Contracts	Project Grants	Other
1	University of Minnesota—Twin Cities	11,066,648	0	6,066,651	4,999,997
2	University of Wisconsin Madison	9,085,588	0	3,665,518	5,420,070
3	University of Illinois Chicago	8,315,124	0	6,752,696	1,562,428
4	State University of New York—Buffalo	7,569,072	0	1,599,995	5,969,077
5	University of California—Berkeley	6,625,850	0	625,850	6,000,000
6	University of California—Los Angeles	6,444,218	0	694,223	5,749,995
7	University of Chicago	5,775,679	0	948,426	4,827,253
8	University of Pennsylvania	5,465,163	0	905,803	4,559,360
9	Ohio State University—Columbus	5,393,543	0	1,464,885	3,928,658
10	University of Miami	5,369,993	0	500,000	4,869,993
11	University of Houston	5,342,037	0	0	5,342,037
12	University of Kansas—Lawrence	5,063,503	726,894	4,336,609	0
13	New York University	4,995,181	0	32,620	4,962,561
14	Georgia Institute of Technology	4,626,012	0	4,626,012	0
15	Vanderbilt University	4,497,349	0	2,073,197	2,424,152
16	University of Washington	4,347,823	0	4,347,823	0
17	Harvard University	4,296,658	0	400,139	3,896,519
18	University of South Florida—Tampa	4,274,301	0	3,559,992	714,309
19	University of Virginia	4,218,905	0	219,817	3,999,088
20	University of Kentucky	4,000,000	0	4,000,000	0
21	Cornell University	3,794,059	0	3,050,547	743,512
22	University of Maryland—College Park	3,532,821	0	163,000	3,369,821
23	Texas A&M University	3,283,331	0	0	3,283,331
24	University of Massachusetts Boston	3,260,424	0	3,260,424	0
25	University of Pittsburgh	3,259,120	0	3,259,120	0
26	Boston University	3,214,867	0	1,959,842	1,255,025
27	University of Oregon	3,165,362	0	3,165,362	0
28	Oregon Health and Science University	2,790,000	0	2,790,000	0
29	University of Southern California	2,720,822	0	0	2,720,822
30	University of Nebraska—Lincoln	2,699,205	0	899,648	1,799,557
31	Johns Hopkins University	2,611,653	0	375,482	2,236,171
32	University of California—Riverside	2,593,570	0	0	2,593,570

Table B.20—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
33	University of Missouri—Columbia	2,548,432	0	2,548,432	0
34	Northwestern University Evanston	2,415,276	0	1,456,785	958,491
35	Marquette University	2,398,376	0	2,398,376	0
36	Indiana University Bloomington	2,220,734	0	621,834	1,598,900
37	University of Illinois Urbana-Champaign	2,173,912	0	673,947	1,499,965
38	Duke University	2,100,694	0	949,975	1,150,719
39	University of North Carolina at Charlotte	2,076,396	0	2,076,396	0
40	Arizona State University	1,888,427	0	269,019	1,619,408
41	University of Colorado Denver	1,834,973	5,000	1,829,973	0
42	University of Connecticut—Storrs	1,795,477	0	0	1,795,477
43	Mississippi State University	1,600,000	0	1,600,000	0
44	Virginia Commonwealth University	1,524,999	0	1,524,999	0
45	Lehigh University	1,498,368	0	1,498,368	0
46	Purdue University	1,490,693	0	0	1,490,693
47	University of Michigan Ann Arbor	1,431,797	0	1,105,188	326,609
48	Michigan State University	1,389,770	0	375,595	1,014,175
49	University of Florida	1,387,434	0	1,387,434	0
50	University of Texas—Austin	1,232,246	0	1,232,246	0
51	University of Alabama at Birmingham	1,204,891	0	1,204,891	0
52	Pennsylvania State University—University Park	1,104,161	0	0	1,104,161
53	University of Memphis	1,050,000	0	0	1,050,000
54	Kent State University—Kent	1,043,864	0	175,000	868,864
55	University of California—San Francisco	1,014,736	0	1,014,736	0
56	California State University—Northridge	1,000,000	0	1,000,000	0
57	Rochester Institute of Technology	1,000,000	0	1,000,000	0
58	University of Tennessee—Knoxville	1,000,000	0	1,000,000	0
59	University of Iowa	993,737	0	993,737	0
60	Carnegie Mellon University	993,346	0	142,000	851,346
61	University of Southern Mississippi	992,000	0	992,000	0
62	State University of New York—Albany	950,000	0	950,000	0
63	New Jersey Institute of Technology	949,700	0	949,700	0
64	Gallaudet University	949,480	0	949,480	0
65	Oregon State University	949,044	0	949,044	0

Table B.20—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
66	University of California—Davis	898,000	0	898,000	0
67	Portland State University	859,650	0	859,650	0
68	Wright State University—Dayton	767,258	0	767,258	0
69	University of North Carolina at Greensboro	764,478	764,478	0	0
70	University of North Carolina at Chapel Hill	748,412	0	748,412	0
71	City University of New York System	723,068	0	723,068	0
72	University of New Hampshire Durham	703,494	0	703,494	0
73	Northern Illinois University	655,536	0	80,605	574,931
74	Western Oregon University	629,966	0	629,966	0
75	Fordham University	623,390	0	0	623,390
76	University of Hawaii at Manoa	618,467	0	618,467	0
77	University of Arkansas Fayetteville	600,000	0	600,000	0
78	Texas Tech University	598,325	0	598,325	0
79	Daemen College	595,199	0	595,199	0
80	Southern Methodist University	586,531	0	586,531	0
81	Georgia State University	558,980	0	558,980	0
82	Western Illinois University	524,998	0	524,998	0
83	Wayne State University	514,384	0	514,384	0
84	Illinois State University	495,980	0	495,980	0
85	Middle Tennessee State University	495,649	0	495,649	0
86	University of Texas—San Antonio	490,396	0	0	490,396
87	Utah State University	478,228	0	150,000	328,228
88	University of Northern Colorado	446,364	0	446,364	0
89	California State University—San Diego	443,198	0	443,198	0
90	Yale University	432,465	0	432,465	0
91	University of Arizona	380,679	0	380,679	0
92	Southern University—Baton Rouge	350,000	0	350,000	0
93	Texas Southern University	349,889	0	349,889	0
94	University of Northern Iowa	330,336	0	330,336	0
95	University of Toledo	325,282	0	0	325,282
96	Washington University	316,785	0	316,785	0
97	George Mason University	299,999	0	299,999	0

Table B.20—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
98	University of Rochester	299,985	0	299,985	0
99	University of Minnesota—Twin Cities	11,066,648	0	6,066,651	4,999,997
100	University of Wisconsin Madison	9,085,588	0	3,665,518	5,420,070

Table B.21
The 100 Schools Receiving the Most FY 2005 Federal R&D Funds from the U.S. Department of Commerce, Including Medical-School Funding

Rank	University or College	Total	Contracts	Project Grants	Other
1	University of New Hampshire Durham	31,851,321	317,922	20,597,392	10,936,007
2	University of Colorado Boulder	24,925,702	0	1,097,543	23,828,159
3	University of Hawaii at Manoa	21,314,328	0	7,923,975	13,390,353
4	University of Washington	20,357,170	269,246	5,984,811	14,103,113
5	University of California—San Diego	20,223,830	0	4,286,742	15,937,088
6	Massachusetts Institute of Technology	17,143,283	0	9,630,367	7,512,916
7	Columbia University	14,110,711	0	9,955,850	4,154,861
8	University of Alaska Fairbanks	9,999,329	0	5,441,304	4,558,025
9	University of Oklahoma—Norman	9,936,931	0	0	9,936,931
10	Colorado State University—Fort Collins	9,163,761	0	0	9,163,761
11	University of Maryland—College Park	8,482,577	146,320	1,439,714	6,896,543
12	University of Wisconsin Madison	7,946,526	0	2,932,577	5,013,949
13	Oregon State University	7,818,581	0	2,795,824	5,022,757
14	University of Miami	7,792,134	0	92,511	7,699,623
15	University of North Carolina at Wilmington	6,084,026	0	6,084,026	0
16	University of Southern Mississippi	6,034,076	0	5,642,046	392,030
17	University of South Carolina at Columbia	5,776,726	0	4,876,274	900,452
18	University of Michigan Ann Arbor	5,654,666	0	3,242,138	2,412,528
19	University of Rhode Island—Kingston	5,233,042	60,000	4,824,806	348,236
20	University of Maryland Center for Environmental Science	5,099,330	0	3,989,903	1,109,427
21	Rutgers, the State University of New Jersey—New Brunswick	4,961,238	0	3,062,422	1,898,816
22	University of Massachusetts Dartmouth	4,796,815	0	4,796,815	0
23	University of Mississippi	4,757,274	0	4,659,500	97,774
24	Princeton University	4,682,110	0	4,677,910	4,200
25	Texas A&M University	4,414,634	0	4,147,884	266,750
26	College of William and Mary	4,226,409	430,000	288,850	3,507,559
27	University of California—Santa Barbara	4,136,499	0	311,004	3,825,495
28	University of Delaware	3,871,669	0	3,738,911	132,758
29	Louisiana State University—Baton Rouge	3,860,536	0	3,828,869	31,667
30	Mississippi State University	3,386,861	0	2,879,686	507,175

Table B.21—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
31	University of Connecticut—Storrs	3,287,921	4,800	3,283,121	0
32	Florida International University	3,286,150	0	246,952	3,039,198
33	University of Florida	3,164,911	0	2,979,643	185,268
34	North Carolina State University	3,057,521	0	2,374,558	682,963
35	State University of New York—Stony Brook	2,874,050	0	2,874,050	0
36	University of Maryland Biotechnology Institute	2,649,217	0	301,305	2,347,912
37	Northern Illinois University	2,254,715	0	2,254,715	0
38	Virginia Graduate Marine Science Consortium	2,222,714	0	2,222,714	0
39	University of Arizona	2,015,336	0	1,909,726	105,610
40	University of Illinois Urbana-Champaign	1,967,468	0	1,789,591	177,877
41	University of Maine Orono	1,962,265	0	1,930,598	31,667
42	University of Georgia—Athens	1,946,126	0	1,891,292	54,834
43	California State University—San Jose	1,762,969	0	49,060	1,713,909
44	University of Puerto Rico Mayaguez	1,590,702	0	1,565,702	25,000
45	State University of New York—Albany	1,519,690	63,496	1,206,210	249,984
46	University of Minnesota—Twin Cities	1,511,559	0	1,511,559	0
47	University of Southern California	1,449,304	0	1,442,460	6,844
48	University of New Orleans	1,448,002	0	1,404,561	43,441
49	Ohio State University—Columbus	1,428,459	0	1,428,459	0
50	Utah State University	1,300,000	1,300,000	0	0
51	Harvard University	1,265,502	0	1,265,502	0
52	Florida State University	1,255,334	0	1,130,907	124,427
53	Texas State University—San Marcos	1,201,200	0	1,201,200	0
54	Virginia Polytechnic Institute	1,148,639	0	733,968	414,671
55	Duke University	1,080,255	0	1,028,477	51,778
56	University of California—Los Angeles	1,063,699	0	1,063,699	0
57	University of North Carolina at Chapel Hill	1,043,288	0	1,043,288	0
58	Nova Southeastern University	1,006,016	0	1,006,016	0
59	Plymouth State College	995,729	0	995,729	0
60	Jackson State University	966,636	0	866,636	100,000
61	Louisiana Universities Marine Consortium	944,647	0	523,279	421,368

Table B.21—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
62	Texas A&M University—Corpus Christi	880,613	0	880,613	0
63	Pennsylvania State University—University Park	822,509	0	815,334	7,175
64	University of South Alabama	770,000	0	0	770,000
65	University of Alabama at Huntsville	758,993	0	758,993	0
66	University of Massachusetts Amherst	755,094	0	683,800	71,294
67	University of South Florida—St. Petersburg	750,849	0	750,849	0
68	East Carolina University	667,328	0	667,328	0
69	Cornell University	660,028	40,000	601,909	18,119
70	University of Northern Iowa	640,677	0	640,677	0
71	Indiana University Bloomington	597,904	0	0	597,904
72	University of California—Santa Cruz	544,613	0	544,613	0
73	California State University—San Francisco	525,000	0	0	525,000
74	Purdue University	511,743	0	425,500	86,243
75	University of Notre Dame	504,541	0	504,541	0
76	Western Washington University	498,315	0	468,466	29,849
77	University of Utah	487,506	0	237,506	250,000
78	Idaho State University	475,900	0	475,900	0
79	Morehead State University	443,546	0	443,546	0
80	Georgia Institute of Technology	442,857	0	403,615	39,242
81	University of Connecticut—Avery Point	407,218	0	407,218	0
82	State University of New York—College of Environmental Science and Forestry Syracuse	406,388	0	406,388	0
83	University of Vermont	404,056	0	404,056	0
84	Yale University	399,631	0	239,203	160,428
85	Bucknell University	376,803	0	0	376,803
86	University of Maryland—Baltimore County	376,159	49,494	283,676	42,989
87	George Washington University	370,475	0	178,490	191,985
88	Hampton University	368,000	280,000	38,000	50,000
89	Carnegie Mellon University	363,994	0	350,000	13,994
90	Rice University	360,574	0	0	360,574
91	Rensselaer Polytechnic Institute	349,713	0	0	349,713
92	Northwestern University Evanston	336,240	0	215,000	121,240

Table B.21—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
93	University of Oregon	327,340	0	327,340	0
94	University of Texas—Austin	287,445	0	280,601	6,844
95	Old Dominion University	282,839	0	135,000	147,839
96	University of North Carolina at Charlotte	280,053	0	259,671	20,382
97	University of Akron	274,194	0	37,790	236,404
98	University of California—Irvine	270,562	0	216,732	53,830
99	George Mason University	268,918	0	56,918	212,000
100	Kent State University—Kent	251,856	0	20,000	231,856

Table B.22
The 100 Schools Receiving the Most FY 2005 Federal R&D Funds from the U.S. Department of Commerce, Excluding Medical-School Funding

Rank	University or College	Total	Contracts	Project Grants	Other
1	University of New Hampshire Durham	31,851,321	317,922	20,597,392	10,936,007
2	University of Colorado Boulder	24,925,702	0	1,097,543	23,828,159
3	University of Hawaii at Manoa	21,314,328	0	7,923,975	13,390,353
4	University of Washington	20,357,170	269,246	5,984,811	14,103,113
5	University of California—San Diego	20,223,830	0	4,286,742	15,937,088
6	Massachusetts Institute of Technology	17,143,283	0	9,630,367	7,512,916
7	Columbia University	13,901,899	0	9,747,038	4,154,861
8	University of Alaska Fairbanks	9,999,329	0	5,441,304	4,558,025
9	University of Oklahoma—Norman	9,936,931	0	0	9,936,931
10	Colorado State University—Fort Collins	9,163,761	0	0	9,163,761
11	University of Maryland—College Park	8,482,577	146,320	1,439,714	6,896,543
12	University of Wisconsin Madison	7,946,526	0	2,932,577	5,013,949
13	Oregon State University	7,818,581	0	2,795,824	5,022,757
14	University of Miami	7,792,134	0	92,511	7,699,623
15	University of North Carolina at Wilmington	6,084,026	0	6,084,026	0
16	University of Southern Mississippi	6,034,076	0	5,642,046	392,030
17	University of South Carolina at Columbia	5,776,726	0	4,876,274	900,452
18	University of Michigan Ann Arbor	5,654,666	0	3,242,138	2,412,528
19	University of Rhode Island—Kingston	5,233,042	60,000	4,824,806	348,236
20	University of Maryland Center for Environmental Science	5,099,330	0	3,989,903	1,109,427
21	Rutgers, the State University of New Jersey—New Brunswick	4,961,238	0	3,062,422	1,898,816
22	University of Massachusetts Dartmouth	4,796,815	0	4,796,815	0
23	University of Mississippi	4,757,274	0	4,659,500	97,774
24	Princeton University	4,682,110	0	4,677,910	4,200
25	Texas A&M University	4,414,634	0	4,147,884	266,750
26	College of William and Mary	4,226,409	430,000	288,850	3,507,559
27	University of California—Santa Barbara	4,136,499	0	311,004	3,825,495
28	University of Delaware	3,871,669	0	3,738,911	132,758
29	Louisiana State University—Baton Rouge	3,860,536	0	3,828,869	31,667
30	Mississippi State University	3,386,861	0	2,879,686	507,175

Table B.22—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
31	University of Connecticut—Storrs	3,287,921	4,800	3,283,121	0
32	Florida International University	3,286,150	0	246,952	3,039,198
33	University of Florida	3,164,911	0	2,979,643	185,268
34	North Carolina State University	3,057,521	0	2,374,558	682,963
35	State University of New York—Stony Brook	2,874,050	0	2,874,050	0
36	University of Maryland Biotechnology Institute	2,649,217	0	301,305	2,347,912
37	Northern Illinois University	2,254,715	0	2,254,715	0
38	Virginia Graduate Marine Science Consortium	2,222,714	0	2,222,714	0
39	University of Arizona	2,015,336	0	1,909,726	105,610
40	University of Illinois Urbana-Champaign	1,967,468	0	1,789,591	177,877
41	University of Maine Orono	1,962,265	0	1,930,598	31,667
42	University of Georgia—Athens	1,946,126	0	1,891,292	54,834
43	California State University—San Jose	1,762,969	0	49,060	1,713,909
44	University of Puerto Rico Mayaguez	1,590,702	0	1,565,702	25,000
45	State University of New York—Albany	1,519,690	63,496	1,206,210	249,984
46	University of Minnesota—Twin Cities	1,511,559	0	1,511,559	0
47	University of Southern California	1,449,304	0	1,442,460	6,844
48	University of New Orleans	1,448,002	0	1,404,561	43,441
49	Ohio State University—Columbus	1,428,459	0	1,428,459	0
50	Utah State University	1,300,000	1,300,000	0	0
51	Harvard University	1,265,502	0	1,265,502	0
52	Florida State University	1,255,334	0	1,130,907	124,427
53	Texas State University—San Marcos	1,201,200	0	1,201,200	0
54	Virginia Polytechnic Institute	1,148,639	0	733,968	414,671
55	Duke University	1,080,255	0	1,028,477	51,778
56	University of California—Los Angeles	1,063,699	0	1,063,699	0
57	University of North Carolina at Chapel Hill	1,043,288	0	1,043,288	0
58	Nova Southeastern University	1,006,016	0	1,006,016	0
59	Plymouth State College	995,729	0	995,729	0
60	Jackson State University	966,636	0	866,636	100,000
61	Louisiana Universities Marine Consortium	944,647	0	523,279	421,368

Table B.22—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
62	Texas A&M University—Corpus Christi	880,613	0	880,613	0
63	Pennsylvania State University—University Park	822,509	0	815,334	7,175
64	University of South Alabama	770,000	0	0	770,000
65	University of Alabama at Huntsville	758,993	0	758,993	0
66	University of Massachusetts Amherst	755,094	0	683,800	71,294
67	University of South Florida—St. Petersburg	750,849	0	750,849	0
68	East Carolina University	667,328	0	667,328	0
69	Cornell University	660,028	40,000	601,909	18,119
70	University of Northern Iowa	640,677	0	640,677	0
71	Indiana University Bloomington	597,904	0	0	597,904
72	University of California—Santa Cruz	544,613	0	544,613	0
73	California State University—San Francisco	525,000	0	0	525,000
74	Purdue University	511,743	0	425,500	86,243
75	University of Notre Dame	504,541	0	504,541	0
76	Western Washington University	498,315	0	468,466	29,849
77	University of Utah	487,506	0	237,506	250,000
78	Idaho State University	475,900	0	475,900	0
79	Morehead State University	443,546	0	443,546	0
80	Georgia Institute of Technology	442,857	0	403,615	39,242
81	University of Connecticut—Avery Point	407,218	0	407,218	0
82	State University of New York—College of Environmental Science and Forestry Syracuse	406,388	0	406,388	0
83	University of Vermont	404,056	0	404,056	0
84	Yale University	399,631	0	239,203	160,428
85	Bucknell University	376,803	0	0	376,803
86	University of Maryland—Baltimore County	376,159	49,494	283,676	42,989
87	George Washington University	370,475	0	178,490	191,985
88	Hampton University	368,000	280,000	38,000	50,000
89	Carnegie Mellon University	363,994	0	350,000	13,994
90	Rice University	360,574	0	0	360,574
91	Rensselaer Polytechnic Institute	349,713	0	0	349,713
92	Northwestern University Evanston	336,240	0	215,000	121,240

Table B.22—Continued

Rank	University or College	Total	Contracts	Project Grants	Other
93	University of Oregon	327,340	0	327,340	0
94	University of Texas—Austin	287,445	0	280,601	6,844
95	Old Dominion University	282,839	0	135,000	147,839
96	University of North Carolina at Charlotte	280,053	0	259,671	20,382
97	University of Akron	274,194	0	37,790	236,404
98	University of California—Irvine	270,562	0	216,732	53,830
99	George Mason University	268,918	0	56,918	212,000
100	Kent State University—Kent	251,856	0	20,000	231,856

Table B.23
The 100 Schools Receiving the Most FY 2005 Federal R&D Funds from All Agencies, Including Medical-School Funding

Rank	University or College	Total	Project Grants	Contracts	Cooperative Agreements	Formula Grants
1	Johns Hopkins University	1,155,609,430	524,897,642	511,960,322	118,751,466	0
2	University of Washington	628,139,276	489,098,484	28,260,560	110,411,620	368,612
3	University of Pennsylvania	549,117,228	473,338,359	9,050,772	66,609,978	118,119
4	University of Michigan Ann Arbor	517,250,528	436,892,884	15,041,291	65,106,692	209,661
5	University of California—Los Angeles	507,467,336	406,195,982	8,097,381	93,173,973	0
6	Stanford University	481,181,883	360,921,508	64,036,605	56,223,770	0
7	Massachusetts Institute of Technology	479,423,914	288,831,715	56,027,775	134,564,424	0
8	University of California—San Diego	473,182,259	367,774,118	8,500,820	96,907,321	0
9	University of Wisconsin Madison	465,274,597	384,456,481	32,400,024	42,966,763	5,451,329
10	University of California—San Francisco	451,693,531	374,466,545	17,437,077	59,789,909	0
11	Duke University	444,327,434	330,313,616	20,803,529	93,210,289	0
12	University of Pittsburgh	441,873,571	344,625,614	20,185,543	77,062,414	0
13	Columbia University	438,684,985	387,079,150	6,944,501	44,661,334	0
14	Washington University	420,227,382	320,432,477	8,893,099	90,901,806	0
15	Harvard University	399,417,957	335,456,005	4,860,837	59,101,115	0
16	Yale University	380,022,567	345,593,918	3,179,654	31,248,995	0
17	Cornell University	345,330,015	256,329,525	10,778,132	72,645,136	5,577,222
18	University of North Carolina at Chapel Hill	343,477,234	297,858,547	4,889,165	40,729,522	0
19	University of Minnesota—Twin Cities	339,956,498	262,975,224	14,175,265	57,441,611	5,364,398
20	University of Southern California	314,070,232	226,273,419	44,733,412	43,063,401	0

Table B.23—Continued

Rank	University or College	Total	Project Grants	Contracts	Cooperative Agreements	Formula Grants
21	Case Western Reserve University	297,608,251	241,655,459	30,468,611	25,484,181	0
22	Vanderbilt University	295,708,474	260,540,380	1,369,539	33,798,555	0
23	University of Alabama at Birmingham	290,651,163	168,726,455	57,510,266	63,496,544	917,898
24	University of California—Berkeley	269,866,086	200,057,492	43,043,872	21,284,179	5,480,543
25	University of Chicago	264,128,670	192,531,696	7,163,700	64,433,274	0
26	Baylor College of Medicine	263,130,189	193,851,437	10,853,486	58,425,266	0
27	University of Rochester	252,596,225	154,938,527	5,712,464	91,945,234	0
28	Emory University	239,958,494	195,709,468	15,450,980	28,798,046	0
29	University of California—Davis	234,162,945	190,975,821	3,249,765	39,414,195	523,164
30	Tufts University	232,876,514	65,341,743	6,785,366	160,743,964	5,441
31	Pennsylvania State University— University Park	230,875,878	124,995,551	80,507,416	18,946,386	6,426,525
32	Northwestern University Evanston	229,322,291	194,276,073	6,066,872	28,979,346	0
33	University of Illinois Urbana-Champaign	220,544,098	157,592,072	3,432,700	53,920,654	5,598,672
34	Ohio State University—Columbus	215,595,110	171,309,343	7,284,726	30,963,753	6,037,288
35	Boston University	213,621,164	177,373,008	5,578,423	30,669,733	0
36	University of Arizona	206,739,998	150,689,476	34,908,997	19,066,636	2,074,889
37	University of Florida	206,710,710	174,637,529	6,763,846	21,511,485	3,797,850
38	University of Texas—Austin	201,335,486	107,137,548	76,424,532	17,773,406	0
39	Oregon Health and Science University	192,104,104	173,231,293	3,381,467	15,491,344	0
40	University of Maryland—Baltimore	191,012,200	129,589,841	30,404,417	31,017,942	0
41	University of Virginia	190,670,573	170,843,007	538,305	19,289,261	0

Table B.23—Continued

Rank	University or College	Total	Project Grants	Contracts	Cooperative Agreements	Formula Grants
42	New York University	190,351,046	176,056,179	405,176	13,889,691	0
43	Mount Sinai School of Medicine	188,722,487	154,417,962	10,394,881	23,909,644	0
44	University of Colorado Health Sciences Center	188,027,474	160,779,944	6,249,165	20,998,365	0
45	University of Iowa	187,025,230	177,011,091	3,706,165	6,307,974	0
46	University of Hawaii at Manoa	186,070,738	87,274,736	36,263,136	61,141,318	1,391,548
47	Mayo Medical School	180,730,843	144,680,293	17,186,207	18,864,343	0
48	University of Texas Southwestern Medical Center Dallas	180,550,608	151,765,681	5,103,428	23,681,499	0
49	University of Illinois Chicago	171,331,435	146,458,884	3,687,106	21,185,445	0
50	University of California—Irvine	170,440,930	145,999,408	3,321,559	21,119,963	0
51	University of Texas MD Anderson Cancer Center	164,159,571	139,645,710	3,437,424	21,076,437	0
52	Yeshiva University	160,899,649	151,184,019	4,970,306	4,745,324	0
53	University of Utah	160,161,156	137,095,175	7,653,774	15,412,207	0
54	California Institute of Technology	154,117,521	107,057,855	2,466,668	44,592,998	0
55	University of Colorado Boulder	152,954,539	107,144,630	16,560,946	29,248,963	0
56	University of Maryland—College Park	149,814,426	102,780,081	6,588,456	37,856,509	2,589,380
57	Georgia Institute of Technology	138,030,467	83,245,758	41,382,829	13,401,880	0
58	University of Miami	135,253,036	98,026,822	3,988,008	33,238,206	0
59	Rutgers, the State University of New Jersey—New Brunswick	134,042,623	95,810,049	5,709,142	28,212,420	4,311,012
60	Texas A&M University	133,311,836	93,792,574	3,353,095	29,426,785	6,739,382

Table B.23—Continued

Rank	University or College	Total	Project Grants	Contracts	Cooperative Agreements	Formula Grants
61	University of Medicine and Dentistry of New Jersey	131,391,776	108,415,873	3,851,078	19,124,825	0
62	Purdue University	130,434,880	100,583,493	4,335,380	20,409,807	5,106,200
63	Wake Forest University	129,919,994	86,663,890	17,437,376	25,818,728	0
64	Colorado State University—Fort Collins	127,780,880	74,980,893	12,029,582	37,726,918	3,043,487
65	University of Cincinnati	123,850,451	99,347,810	7,199,257	17,303,384	0
66	Michigan State University	123,413,908	109,418,452	598,527	8,282,880	5,114,049
67	University of Kentucky	122,054,491	101,810,156	1,864,387	13,116,660	5,263,288
68	University of Massachusetts Medical School	119,232,276	111,331,098	974,985	6,926,193	0
69	University of Connecticut—Storrs	118,344,483	101,403,498	453,331	15,439,546	1,048,108
70	University of Texas Medical Branch Galveston	118,205,731	84,474,034	12,738,569	20,993,128	0
71	Princeton University	115,183,872	99,709,427	1,441,789	14,032,656	0
72	University of Texas Health Science Center Houston	108,176,787	77,632,295	477,048	30,067,444	0
73	Dartmouth College	107,049,852	100,281,694	837,820	5,930,338	0
74	Wayne State University	106,619,233	86,016,573	13,880,951	6,721,709	0
75	Indiana University—Purdue University at Indianapolis	102,734,563	89,336,291	0	13,398,272	0
76	University of California—Santa Barbara	101,676,071	75,266,338	9,303,389	17,106,344	0
77	University of New Mexico—Albuquerque	99,664,933	70,194,757	17,146,509	12,323,667	0
78	State University of New York—Stony Brook	98,484,770	91,343,397	628,252	6,513,121	0

Table B.23—Continued

Rank	University or College	Total	Project Grants	Contracts	Cooperative Agreements	Formula Grants
79	Carnegie Mellon University	98,047,172	82,944,680	6,101,449	9,001,043	0
80	University of Missouri—Columbia	97,733,374	71,733,372	525,521	20,416,940	5,057,541
81	Illinois Institute of Technology	95,249,954	13,821,292	81,403,642	25,020	0
82	University of Louisville	92,093,174	63,650,125	4,330,830	24,112,219	0
83	University of Georgia—Athens	91,733,976	67,695,308	2,647,262	15,929,011	5,462,395
84	Georgetown University	91,406,663	76,102,654	3,137,970	7,552,951	4,613,088
85	Medical University of South Carolina	89,474,940	82,084,592	664,970	6,725,378	0
86	Iowa State University	88,762,215	72,836,812	1,165,579	8,458,059	6,301,765
87	Virginia Polytechnic Institute	85,307,243	50,188,828	14,438,285	16,125,762	4,554,368
88	Oregon State University	85,090,046	67,337,153	2,850,474	11,411,019	3,491,400
89	Tulane University	85,045,786	63,599,337	55,493	21,390,956	0
90	Virginia Commonwealth University	84,842,848	71,399,096	5,783,813	7,659,939	0
91	Medical College of Wisconsin	83,167,179	71,029,156	1,189,338	10,948,685	0
92	University of Nevada Reno	83,006,849	55,239,189	14,495,368	11,992,204	1,280,088
93	Louisiana State University—Baton Rouge	82,579,936	49,280,756	1,447,053	28,349,551	3,502,576
94	Rockefeller University	82,523,825	72,060,656	4,599,223	5,863,946	0
95	University of Texas Health Science Center San Antonio	82,019,724	70,723,115	1,171,962	10,124,647	0
96	Arizona State University	81,461,760	64,665,326	1,106,434	15,690,000	0
97	Brown University	81,358,802	71,129,876	2,321,001	7,907,925	0
98	University of Vermont	81,119,943	74,200,136	658,093	4,592,827	1,668,887
99	North Carolina State University	81,033,194	66,772,724	1,717,310	5,538,581	7,004,579

Table B.23—Continued

Rank	University or College	Total	Project Grants	Contracts	Cooperative Agreements	Formula Grants
100	State University of New York—Buffalo	80,062,350	70,044,083	1,316,855	8,701,412	0

Table B.24
The 100 Schools Receiving the Most FY 2005 Federal R&D Funds from All Agencies, Excluding Medical-School Funding

Rank	University or College	Total	Project Grants	Contracts	Cooperative Agreements	Formula Grants
1	Johns Hopkins University	743,000,644	168,399,554	511,960,322	62,640,768	0
2	Massachusetts Institute of Technology	479,423,914	288,831,715	56,027,775	134,564,424	0
3	University of Wisconsin Madison	337,832,047	264,810,636	32,400,024	35,170,058	5,451,329
4	University of Washington	337,256,200	252,594,486	28,260,560	56,032,542	368,612
5	University of California—Berkeley	269,866,086	200,057,492	43,043,872	21,284,179	5,480,543
6	University of Michigan Ann Arbor	259,466,907	202,897,835	15,041,291	41,318,120	209,661
7	University of California—San Diego	242,670,376	173,174,764	8,500,820	60,994,792	0
8	Pennsylvania State University—University Park	230,875,878	124,995,551	80,507,416	18,946,386	6,426,525
9	Cornell University	222,108,892	148,619,115	7,087,622	60,824,933	5,577,222
10	University of Illinois Urbana-Champaign	220,544,098	157,592,072	3,432,700	53,920,654	5,598,672
11	Stanford University	218,817,568	135,981,018	64,036,605	18,799,945	0
12	University of California—Los Angeles	210,671,659	164,715,587	8,052,381	37,903,691	0
13	University of Minnesota—Twin Cities	204,985,650	140,242,725	14,175,265	45,203,262	5,364,398
14	Harvard University	202,851,603	165,186,338	4,860,837	32,804,428	0
15	University of Texas—Austin	201,335,486	107,137,548	76,424,532	17,773,406	0
16	Columbia University	199,965,591	173,833,308	3,310,067	22,822,216	0
17	Tufts University	187,308,976	21,378,120	6,785,366	159,140,049	5,441
18	University of Southern California	181,927,298	117,931,853	44,733,412	19,262,033	0
19	University of Hawaii at Manoa	166,060,302	75,258,915	36,263,136	53,146,703	1,391,548

Table B.24—Continued

Rank	University or College	Total	Project Grants	Contracts	Cooperative Agreements	Formula Grants
20	University of Texas MD Anderson Cancer Center	164,159,571	139,645,710	3,437,424	21,076,437	0
21	University of Pittsburgh	159,758,761	104,337,370	20,185,543	35,235,848	0
22	University of Pennsylvania	157,328,704	122,067,337	9,050,772	26,092,476	118,119
23	California Institute of Technology	154,117,521	107,057,855	2,466,668	44,592,998	0
24	University of Colorado Boulder	152,954,539	107,144,630	16,560,946	29,248,963	0
25	University of Maryland—College Park	149,814,426	102,780,081	6,588,456	37,856,509	2,589,380
26	University of California—Davis	148,714,737	112,107,502	3,249,765	32,834,306	523,164
27	Georgia Institute of Technology	138,030,467	83,245,758	41,382,829	13,401,880	0
28	University of Arizona	135,552,259	86,181,607	34,908,997	12,386,766	2,074,889
29	Ohio State University—Columbus	134,880,173	99,387,240	7,277,526	22,178,119	6,037,288
30	Rutgers, the State University of New Jersey—New Brunswick	134,042,623	95,810,049	5,709,142	28,212,420	4,311,012
31	Texas A&M University	133,311,836	93,792,574	3,353,095	29,426,785	6,739,382
32	University of North Carolina at Chapel Hill	130,518,897	108,528,180	4,852,681	17,138,036	0
33	Purdue University	130,434,880	100,583,493	4,335,380	20,409,807	5,106,200
34	Colorado State University—Fort Collins	127,780,880	74,980,893	12,029,582	37,726,918	3,043,487
35	University of Florida	125,561,724	102,620,782	6,763,846	12,379,246	3,797,850
36	University of Rochester	120,228,000	42,467,314	5,712,464	72,048,222	0
37	University of Alabama at Birmingham	117,713,363	42,173,229	57,107,004	17,515,232	917,898
38	Duke University	115,879,714	87,790,365	18,313,552	9,775,797	0

Table B.24—Continued

Rank	University or College	Total	Project Grants	Contracts	Cooperative Agreements	Formula Grants
39	Princeton University	115,183,872	99,709,427	1,441,789	14,032,656	0
40	Boston University	111,973,514	82,252,001	5,578,423	24,143,090	0
41	Michigan State University	109,646,678	97,127,853	598,527	6,806,249	5,114,049
42	Northwestern University Evanston	106,657,045	84,002,052	5,936,872	16,718,121	0
43	University of California—Santa Barbara	101,676,071	75,266,338	9,303,389	17,106,344	0
44	Carnegie Mellon University	98,047,172	82,944,680	6,101,449	9,001,043	0
45	University of Chicago	95,606,944	58,184,590	7,163,700	30,258,654	0
46	Illinois Institute of Technology	95,249,954	13,821,292	81,403,642	25,020	0
47	University of Illinois Chicago	93,226,032	73,072,942	3,687,106	16,465,984	0
48	University of California—San Francisco	93,194,073	68,024,814	17,437,077	7,732,182	0
49	University of Georgia—Athens	91,733,976	67,695,308	2,647,262	15,929,011	5,462,395
50	University of California—Irvine	90,082,022	81,119,910	3,321,559	5,640,553	0
51	Iowa State University	88,762,215	72,836,812	1,165,579	8,458,059	6,301,765
52	Yale University	85,438,771	75,746,994	3,179,654	6,512,123	0
53	Virginia Polytechnic Institute	85,307,243	50,188,828	14,438,285	16,125,762	4,554,368
54	Oregon State University	85,090,046	67,337,153	2,850,474	11,411,019	3,491,400
55	Louisiana State University—Baton Rouge	82,579,936	49,280,756	1,447,053	28,349,551	3,502,576
56	Rockefeller University	82,523,825	72,060,656	4,599,223	5,863,946	0
57	University of Missouri—Columbia	82,184,849	57,284,847	525,521	19,316,940	5,057,541
58	Arizona State University	81,461,760	64,665,326	1,106,434	15,690,000	0

Table B.24—Continued

Rank	University or College	Total	Project Grants	Contracts	Cooperative Agreements	Formula Grants
59	North Carolina State University	81,033,194	66,772,724	1,717,310	5,538,581	7,004,579
60	University of Utah	77,348,410	62,979,799	7,653,774	6,714,837	0
61	Indiana University Bloomington	76,945,710	64,379,488	2,190,685	10,375,537	0
62	Mississippi State University	76,911,360	26,051,784	13,322,359	32,926,083	4,611,134
63	New Mexico State University— Las Cruces	74,529,113	19,035,757	37,025,843	16,600,754	1,866,759
64	University of Alaska Fairbanks	72,582,178	49,054,799	847,554	21,219,944	1,459,881
65	University of Nevada Reno	69,290,805	42,798,345	14,495,368	10,717,004	1,280,088
66	New York University	66,893,119	58,355,535	405,176	8,132,408	0
67	University of Delaware	64,595,231	52,658,198	1,208,135	9,397,932	1,330,966
68	University of California—Santa Cruz	63,882,393	37,975,797	19,324,455	6,582,141	0
69	Case Western Reserve University	62,655,231	31,343,200	28,747,422	2,564,609	0
70	University of New Mexico— Albuquerque	61,924,181	38,304,873	17,146,509	6,472,799	0
71	University of Kentucky	60,715,958	42,694,215	1,863,040	10,895,415	5,263,288
72	Washington State University	60,295,979	50,802,938	2,212,958	3,379,556	3,900,527
73	University of Massachusetts Amherst	60,049,575	45,104,230	1,553,307	11,025,989	2,366,049
74	George Mason University	59,121,493	15,962,592	4,954,818	38,204,083	0
75	University of Maryland—Baltimore	58,012,795	27,168,474	30,404,417	439,904	0
76	University of Iowa	57,270,993	52,804,323	3,706,165	760,505	0
77	University of Virginia	56,644,293	49,693,889	538,305	6,412,099	0
78	University of Nebraska—Lincoln	56,535,969	39,198,417	334,900	13,511,071	3,491,581

Table B.24—Continued

Rank	University or College	Total	Project Grants	Contracts	Cooperative Agreements	Formula Grants
79	University of California—Riverside	55,914,906	37,489,331	80,187	18,345,388	0
80	Florida State University	55,774,364	49,486,469	84,000	6,203,895	0
81	Vanderbilt University	55,004,710	47,121,256	1,393,938	6,489,516	0
82	University of Kansas—Lawrence	54,578,397	46,305,479	1,568,621	6,704,297	0
83	State University of New York—Buffalo	53,460,386	43,960,520	1,316,855	8,183,011	0
84	University of New Hampshire Durham	53,391,154	38,250,985	2,003,123	11,439,764	1,697,282
85	University of Miami	52,919,375	35,447,147	3,988,008	13,484,220	0
86	University of Connecticut—Storrs	52,477,998	39,573,985	453,331	11,402,574	1,048,108
87	Emory University	52,368,040	33,567,001	15,450,980	3,350,059	0
88	Montana State University—Bozeman	51,840,031	36,466,943	2,379,857	10,950,281	2,042,950
89	University of Notre Dame	51,186,454	42,645,497	2,340,957	6,200,000	0
90	Wayne State University	50,557,180	35,617,939	13,880,951	1,058,290	0
91	University of South Carolina at Columbia	50,177,371	44,831,363	-49,492	5,395,500	0
92	George Washington University	49,943,581	6,309,981	2,266,843	41,366,757	0
93	University of Louisville	48,474,998	20,515,727	4,330,830	23,628,441	0
94	Washington University	48,408,922	40,421,977	5,777,473	2,209,472	0
95	University of Tennessee—Knoxville	46,046,292	32,899,293	2,621,209	5,438,147	5,087,643
96	University of Oregon	44,687,478	44,618,098	-53,550	122,930	0
97	State University of New York—Stony Brook	44,496,514	39,395,839	628,252	4,472,423	0

Table B.24—Continued

Rank	University or College	Total	Project Grants	Contracts	Cooperative Agreements	Formula Grants
98	Utah State University	44,239,650	15,463,454	21,122,113	5,666,284	1,987,799
99	University of Mississippi	43,921,144	10,501,839	9,291,655	24,127,650	0
100	Florida International University	41,779,657	31,696,625	2,349,794	7,733,238	0

Table B.25
All Medical Schools Receiving FY 2005 Federal R&D Funds

Rank	University or College	Total
1	Johns Hopkins University	412,608,786
2	University of Pennsylvania	391,788,524
3	Washington University	371,818,460
4	University of California—San Francisco	358,499,458
5	Duke University	328,447,720
6	University of California—Los Angeles	296,795,677
7	Yale University	294,583,796
8	University of Washington	290,883,076
9	University of Pittsburgh	282,114,810
10	Baylor College of Medicine	262,689,267
11	Stanford University	262,364,315
12	University of Michigan Ann Arbor	257,783,621
13	Vanderbilt University	240,703,764
14	Columbia University	238,719,394
15	Case Western Reserve University	234,953,020
16	University of California—San Diego	230,511,883
17	University of North Carolina at Chapel Hill	212,958,337
18	Harvard University	196,566,354
19	Mount Sinai School of Medicine	188,594,642
20	Emory University	187,590,454
21	Mayo Medical School	180,730,843
22	University of Texas Southwestern Medical Center Dallas	176,708,412
23	University of Colorado Health Sciences Center	176,033,897
24	University of Alabama at Birmingham	172,937,800
25	University of Chicago	168,521,726
26	Oregon Health and Science University	166,358,592
27	Yeshiva University	152,325,241
28	University of Minnesota—Twin Cities	134,970,848
29	University of Virginia	134,026,280
30	University of Maryland—Baltimore	132,999,405
31	University of Rochester	132,368,225
32	University of Southern California	132,142,934
33	University of Iowa	129,754,237

Table B.25—Continued

Rank	University or College	Total
34	University of Wisconsin Madison	127,442,550
35	New York University	123,457,927
36	Cornell University	123,221,123
37	Northwestern University Evanston	122,665,246
38	University of Texas Medical Branch Galveston	116,231,459
39	University of Massachusetts Medical School	115,652,080
40	Wake Forest University	105,669,769
41	Boston University	101,647,650
42	Indiana University–Purdue University at Indianapolis	99,352,102
43	University of Cincinnati	96,251,549
44	University of California—Davis	85,448,208
45	Medical University of South Carolina	83,646,411
46	University of Utah	82,812,746
47	Medical College of Wisconsin	82,768,429
48	University of Miami	82,333,661
49	University of Texas Health Science Center Houston	82,238,556
50	University of Florida	81,148,986
51	Ohio State University—Columbus	80,714,937
52	University of California—Irvine	80,358,908
53	Dartmouth College	79,457,102
54	University of Illinois Chicago	78,105,403
55	Thomas Jefferson University—Jefferson Medical College	76,540,310
56	University of Texas Health Science Center San Antonio	73,632,645
57	University of Arizona	71,187,739
58	University of Medicine and Dentistry of New Jersey—Robert Wood Johnson Medical School	69,641,984
59	University of Connecticut—Storrs	65,866,485
60	Tulane University	64,217,456
61	University of Kentucky	61,338,533
62	University of Medicine and Dentistry of New Jersey—New Jersey Medical School	58,642,871
63	University of Vermont	57,528,030
64	Georgetown University	56,910,909
65	Virginia Commonwealth University	56,439,102
66	Wayne State University	56,062,053

Table B.25—Continued

Rank	University or College	Total
67	State University of New York—Stony Brook	53,988,256
68	University of Arkansas for Medical Sciences	51,728,859
69	Rush Medical College of Rush University	49,642,503
70	University of Tennessee Health Science Center	48,831,165
71	Pennsylvania State University College of Medicine	46,805,533
72	Brown University	45,993,515
73	Tufts University	45,567,538
74	University of Louisville	43,618,176
75	University of Oklahoma Health Sciences Center	42,806,515
76	University of South Florida—Tampa	40,268,334
77	Louisiana State University Health Science Center—New Orleans	39,305,275
78	Meharry Medical College	38,838,479
79	Medical College of Georgia	38,468,088
80	University of New Mexico—Albuquerque	37,740,752
81	Loma Linda University	36,013,572
82	University of Kansas Medical Center	34,788,213
83	University of Nebraska Medical Center	33,804,929
84	Morehouse College	32,923,340
85	State University of New York—Buffalo	26,601,964
86	Temple University	25,481,744
87	University of Puerto Rico Medical Sciences	24,997,081
88	New York Medical College	24,745,903
89	St. Louis University	24,067,076
90	Loyola University of Chicago	23,625,786
91	Charles R. Drew University of Medicine and Science	22,513,550
92	Drexel University	22,336,537
93	State University of New York—Health Science Center at Brooklyn	21,277,423
94	University of Hawaii at Manoa	20,010,436
95	State University of New York—Health Science Center at Syracuse	18,519,957
96	Texas A&M University Health Science Center	18,479,393
97	Howard University	17,298,836
98	University of Missouri—Columbia	15,548,525
99	George Washington University	15,429,348

Table B.25—Continued

Rank	University or College	Total
100	Medical College of Ohio	15,391,829
101	West Virginia University	14,440,512
102	Louisiana State University Medical Center—Shreveport	14,421,502
103	Michigan State University	13,767,230
104	University of Nevada Reno	13,716,044
105	University of South Dakota	12,348,071
106	Albany Medical College	12,269,242
107	University of Mississippi	12,184,815
108	University of South Alabama	11,041,909
109	Wright State University—Dayton	10,981,252
110	University of Missouri—Kansas City	10,370,869
111	University of North Dakota	8,486,042
112	Rosalind Franklin University of Medicine and Science (formerly Finch University)	8,102,308
113	University of South Carolina at Columbia	7,541,171
114	Universidad Central del Caribe School of Medicine	6,972,037
115	Southern Illinois University Carbondale	6,924,532
116	Texas Tech University Health Science Center	5,986,432
117	Medical College of Hampton Roads—Eastern Virginia Medical School	5,794,440
118	Marshall University	5,648,668
119	Ponce School of Medicine	5,296,788
120	Creighton University School of Medicine	4,483,911
121	East Carolina University	3,296,881
122	Northeastern Ohio University College of Medicine	3,287,751
123	East Tennessee State University	2,851,229
124	University of Minnesota—Duluth	1,791,578
125	Mercer University—Macon	1,575,936
126	Uniformed Services University of the Health Sciences	0

Table B.26
Affiliated Research Institutes Receiving FY 2005 Federal R&D Funds

Research Institute (Affiliated University)	Total
Applied Physics Lab (Johns Hopkins University)	481,054,146
Southern Research Institute (University of Alabama at Birmingham)	36,056,419
Whitehead Institute of Biomedical Research (Massachusetts Institute of Technology)	21,266,355
Woods Hole Oceanographic Institute (Massachusetts Institute of Technology)	69,013,793
Yale Southern Observatory (Yale University)	168,141

Table B.27
FY 2005 Federal R&D Funding to Schools, from Top Six Agencies

Funding Agency	Medical Schools	Nonmedical Schools	All Schools
DoD	89,294,933	2,265,248,993	2,354,543,926
HHS	11,474,143,673	5,554,876,595	17,029,020,268
NASA	20,134,727	1,018,460,458	1,038,595,185
DOE	11,582,363	974,862,934	986,445,297
NSF	14,920,419	3,181,198,490	3,196,118,909
USDA	8,067,620	1,100,765,566	1,108,833,186

Glossary

Affiliated Research Institute. A nonprofit, independently operated research organization that is very closely affiliated with a particular university or college. These research organizations share research facilities, faculty, or staff with a university or college. See Table 3.2 in Chapter Three for a list of affiliated research institutes.

Agency. A department, agency, or instrumentality of the U.S. government (see 31 U.S.C. 101).

Applied Research. Systematic study to gain knowledge or understanding necessary to determine the means by which a recognized and specific need may be met (see OMB Circular A-11, Section 84). See *Conduct of Research and Development*.

Award. A contract, grant, cooperative agreement, or other legal instrument that a federal agency uses to engage the services of a nongovernmental entity to carry out a governmental responsibility or to achieve some purpose.

Basic Research. Systematic study directed toward fuller knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications toward processes or products in mind (see OMB Circular A-11, Section 84). See *Conduct of Research and Development*.

College. A postsecondary school that offers general or liberal-arts education, usually leading to an associate, bachelor's, master's, doctor's, or first professional degree. Although this term usually encompasses junior colleges and community colleges, this report does not include junior colleges, community colleges, technical schools, or schools granting only associate degrees (see NCES, 2008). See *University*.

Conduct of Research and Development. Systematic creative work undertaken to increase the stock of knowledge, including knowledge of humanity, culture, and society, and the use of this stock of knowledge to devise new applications. Includes Basic Research, Applied Research, and Development and the administrative expenses associated with each. Excludes research and development facilities and equipment. Also excludes routine product testing, quality control, mapping, collection of general-purpose statistics, experimental production, routine monitoring and evaluation of an operational program, and the training of scientific and technical personnel (see OMB Circular A-11, Section 84). See *Basic Research, Applied Research, and Development*.

Contract. A legal instrument reflecting a relationship between the U.S. government and a state, local government, or other recipient (1) when the principal purpose of the instrument is to acquire (by purchase, lease, or barter) property or services for the direct benefit or use of the U.S. government or (2) when the agency decides in a specific instance that the use of a procurement contract is appropriate (see 31 U.S.C. 6303).

Cooperative Agreement. A legal instrument reflecting a relationship between the U.S. government and a state, local government, or other recipient (1) when the principal purpose of the relationship is to transfer a thing of value to the state, local government, or other recipient to carry out a public purpose of support or stimulation authorized by a law of the United States instead of acquiring (by purchase, lease, or barter) property or services for the direct benefit or use of the U.S. government and (2) when substantial involvement is expected between the executive agency and the state, local government, or other recipient when carrying out the activity contemplated in the agreement (see 31 U.S.C. 6305). Does not include cooperative research and development agreements. See *Cooperative Research and Development Agreement*.

Cooperative Research and Development Agreement (CRADA). Any agreement between one or more federal laboratories and one or more nonfederal parties under which the government, through its laboratories, provides personnel, services, facilities, equipment, intellectual property, or other resources with or without reimbursement (but not funds to nonfederal parties) and the nonfederal parties provide funds, personnel, services, facilities, equipment, intellectual property, or other resources toward the conduct of specified research or development efforts that are consistent with the missions of the laboratory, except that such term does not include a procurement contract or cooperative agreement as those terms are used in sections 6303, 6304, and 6305 of Title 31 (see 15 U.S.C. 3710a). NOTE: This report does not provide information on CRADAs; we provide this definition solely to enable readers to understand the differences between CRADAs and cooperative agreements.

Design Patent. A patent granted to anyone who invents a new, original, and ornamental design for an article of manufacture (see USPTO, 2009). See *Patent*.

Development. The systematic application of knowledge or understanding, directed toward the production of useful materials, devices, and systems or methods, including design, development, and improvement of prototypes and new processes to meet specific requirements (see OMB Circular A-11, Section 84). See *Conduct of Research and Development*.

Expenditure. “A disbursement of funds” (*Merriam-Webster’s Collegiate Dictionary*, 1993). The National Science Foundation defines *expenditures* as “funds actually spent by an institution during its fiscal year” (NSF, 2007a, 2007b). See *Outlay*.

Faculty. Members of the instructional or research staff who are employed full or part time, as defined by the institution (see NCES, 2008).

Federally Funded Research and Development Center (FFRDC). An FFRDC meets some special long-term research or development need that cannot be met as effectively by existing in-house or contractor resources. FFRDCs enable agencies to use private-sector resources to accomplish tasks that are integral to the mission and operation of the sponsoring agency. To discharge its responsibilities to the sponsoring agency, an FFRDC has access, beyond what is common in a normal contractual relationship, to government and supplier data, including sensitive and proprietary data, and to employees and facilities. An FFRDC is required to conduct its business in a manner befitting its special relationship with the government, to operate in the public interest with objectivity and independence, to be free from organizational conflicts of interest, and to have full disclosure of its affairs to the sponsoring agency. It is not the government’s intent that an FFRDC use its privileged information or access to facilities to compete with the private sector. However, an FFRDC may perform work other than that for the sponsoring agency under the Economy Act (47 Stat. 417), or other applicable legislation, when the work is not otherwise available from the private sector. Each of the FFRDCs the federal gov-

ernment currently sponsors is administered (i.e., operated) by an industrial firm, university or consortium of universities, or nonprofit institution (see 48 C.F.R. 35.017).

Fiscal Year. The federal government’s accounting period. It begins on October 1 and ends on September 30 and is designated by the calendar year in which it ends (see OMB Circular A-11, Section 20).

Formula Grant. Allocation of money to states or their subdivisions according to a formula prescribed by law or administrative regulation, for continuing activities that are not confined to a specific project (see CFDA, 2008). See *Grant*. Note that, for the purposes of this report, all grants awarded under Catalog of Federal Domestic Assistance (CFDA) program 10.216 (1890 Institution Capacity Building Grants) were treated as formula grants instead of project grants because only 18 institutions of higher education in the nation were eligible to receive federal research and development grant funds under this program, and these were the same 18 institutions that received substantially larger formula grants each year under the closely related CFDA program 10.205 (Payments to 1890 Land-Grant Colleges and Tuskegee University).

Grant. A legal instrument reflecting a relationship between the U.S. government and a state, local government, or other recipient (1) when the principal purpose of the relationship is to transfer a thing of value to the state or local government or other recipient to carry out a public purpose of support or stimulation authorized by a law of the United States instead of acquiring (by purchase, lease, or barter) property or services for the direct benefit or use of the U.S. government and (2) when substantial involvement is not expected between the executive agency and the state, local government, or other recipient when carrying out the activity contemplated in the agreement (see 31 U.S.C. 6304).

Medical School. An institution offering a program of medical education leading to the MD degree. Virtually all state licensing boards require that U.S. medical schools be accredited by the Liaison Committee on Medical Education (LCME) as a condition for licensing their graduates to practice medicine within a state. Currently, the LCME accredits 126 programs at universities and colleges within the United States, all of which lead to the MD degree (see LCME, 2009). Note that the term *medical school*, as used in this report, does not encompass hospitals or medical centers (i.e., so-called teaching hospitals) that are in some way affiliated with or connected to a university or college or its medical school. Instead, the term refers only to the 126 programs within universities and colleges that provide medical education leading to the MD degree. Note also that, in this report, *medical school* excludes osteopathic, chiropractic, and podiatry schools.

Obligations. Binding agreements that will result in outlays (see *Outlay*) immediately or in the future—that is, the dollar amount of orders placed, contracts awarded, services received, and similar transactions during a given period that will require payments during the same or a future period. Budgetary resources must be available before obligations can be incurred legally (see OMB, 2001; OMB Circular A-11, Section 20).

Outlay. A payment to liquidate an obligation (other than the repayment of debt principal). Outlays are generally equal to cash disbursements, and they are the measure of government spending (see OMB, 2001; OMB Circular A-11, Section 20). See *Expenditure*.

Patent. A property right granted by the U.S. government to an inventor “to exclude others from making, using, offering for sale, or selling the invention throughout the United States or importing the invention into the United States” for a limited time in exchange for public disclosure of the invention when the patent is granted (see USPTO, 2009).

Patent Application. An application for patent filed under 35 U.S.C. 111(a) that includes all types of patent applications (i.e., utility, design, plant, and reissue) except provisional applications. The nonprovisional application establishes the filing date and initiates the examination process. A nonprovisional utility patent application must include a specification, including a claim or claims; drawings, when necessary; an oath or declaration; and the prescribed filing fee (see USPTO, 2009). See *Patent*.

Plant Patent. A patent granted to anyone who invents or discovers and asexually reproduces any distinct and new variety of plant (see USPTO, 2009). See *Patent*.

Research and Development (R&D). Throughout this report, this term refers only to the *Conduct of Research and Development*, as defined above.

University. An institution of higher education consisting of a liberal-arts college, a diverse graduate program, and usually two or more professional schools or faculties empowered to confer degrees in various fields of study (see NCES, 2008). See *College*.

Utility Patent. A patent granted to anyone who invents or discovers any new, useful, and nonobvious process, machine, article of manufacture, or composition of matter, or any new and useful improvement thereof (see USPTO, 2009). See *Patent*.

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