

The University of Massachusetts

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FY 2015 Annual R&D Expenditures Report Expanded Version (With NSF Rankings and Comparison Data)

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TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
• ADDITIONAL HIGHLIGHTS FOR UMASS AND UMASS CAMPUSES R&D EXPENDITURES DATA	
○ UMASS AS PERCENT OF ALL MASSACHUSETTS AND NEW ENGLAND INSTITUTIONS	4
○ NSF RESEARCH AND DEVELOPMENT EXPENDITURES RANKINGS	5
TOTAL R&D EXPENDITURES- UMASS SYSTEM AND CAMPUSES	7
• FY2011 - FY2015	
• UMASS SYSTEM	9
• UMASS AMHERST	10
• UMASS BOSTON	11
• UMASS DARTMOUTH	12
• UMASS LOWELL	13
• UMASS MEDICAL SCHOOL	14
• UMASS PRESIDENT’S OFFICE	15
• R&D EXPENDITURES BY FIELD FY2015	16
• TOTAL R&D EXPENDITURES BY FIELD FY2015 – ADDITIONAL CAMPUS DETAILS	19
• TOTAL R&D EXPENDITURES BY FEDERAL GOVERNMENT AGENCY - FY2015	20
C. LIFE SCIENCES R&D EXPENDITURES	21
• EXPENDITURES BY FIELD FY2015	21
• EXPENDITURES BY FIELD FY2011 - FY2015	22

APPENDICES

- **APPENDIX A1:** UMASS TOTAL R&D EXPENDITURES AS PERCENT OF US, NEW ENGLAND, MASSACHUSETTS FIGURES FY 2009-2014 24
- **APPENDIX A2:** UMASS TOTAL R&D EXPENDITURES AS PERCENT OF US, NEW ENGLAND, MASSACHUSETTS FIGURES BY FIELD: FY 2014 24
- **APPENDIX B1:** TOTAL R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES, RANKED BY FY 2014 TOTAL R&D EXPENDITURES: FY 2007-2014 25
- **APPENDIX B2:** TOTAL R&D EXPENDITURES AT PUBLIC UNIVERSITIES AND COLLEGES, RANKED BY FY 2014 TOTAL R&D EXPENDITURES (TOP 300 INSTITUTIONS) 33
- **APPENDIX C:** FEDERALLY FINANCED R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES, RANKED BY FY 2014 EXPENDITURES: FY 2007-2014 40
- **APPENDIX D:** R&D EXPENDITURES AT UNIVERSITIES AND COLLEGES, RANKED BY TOTAL R&D EXPENDITURES, FOR THE FIRST 150 INSTITUTIONS, BY SOURCE OF FUNDS: FY 2014 49
- **APPENDIX E:** HIGHER EDUCATION R&D EXPENDITURES AT ALL INSTITUTIONS, RANKED BY ALL NON-MEDICAL SCHOOL R&D EXPENDITURES (TOP 300 INSTITUTIONS) 53
- **APPENDIX F:** TOTAL R&D EXPENDITURES IN THE COMPUTER SCIENCES AT UNIVERSITIES AND COLLEGES, RANKED BY FY 2014 TOTAL FOR THE FIRST 100 INSTITUTIONS: FY 2014 61
- **APPENDIX G:** TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES IN ENGINEERING AT UNIVERSITIES AND COLLEGES, RANKED BY FY 2014 TOTAL FOR THE FIRST 150 INSTITUTIONS: FY 2014 64
- **APPENDIX H:** HIGHER EDUCATION R&D EXPENDITURES IN THE ENVIRONMENTAL SCIENCES, RANKED BY ALL FY 2014 ENVIRONMENTAL SCIENCES FOR THE FIRST 100 INSTITUTIONS: FY 2014 68
- **APPENDIX I:** HIGHER EDUCATION R&D EXPENDITURES IN THE LIFE SCIENCES, RANKED BY THE FIRST 100 INSTITUTIONS: FY 2014, AND BY SUBFIELD FOR FY 2014 71
- **APPENDIX J:** TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES IN THE MATHEMATICAL SCIENCES AT UNIVERSITIES AND COLLEGES, RANKED BY FY 2014 TOTAL FOR THE FIRST 100 INSTITUTIONS: FY 2011-14 74
- **APPENDIX K:** R&D EXPENDITURES IN THE PHYSICAL SCIENCES AT UNIVERSITIES AND COLLEGES, RANKED BY ALL FY 2014 PHYSICAL SCIENCES FOR THE FIRST 100 INSTITUTIONS 77
- **APPENDIX L:** TOTAL AND FEDERALLY FINANCED R&D EXPENDITURES IN PSYCHOLOGY AT UNIVERSITIES AND COLLEGES, RANKED BY FY 2014 TOTAL FOR THE FIRST 100 INSTITUTIONS: FY 2011-14 80
- **APPENDIX M:** R&D EXPENDITURES IN THE SOCIAL SCIENCES AT UNIVERSITIES AND COLLEGES, RANKED BY ALL FY 2011 SOCIAL SCIENCES FOR THE FIRST 100 INSTITUTIONS: FY 2014, AND BY SUBFIELD FOR FY 2014 (TOP 100 INSTITUTIONS) 83

APPENDICES (CONT'D)

- **APPENDIX N:** HIGHER EDUCATION R&D EXPENDITURES IN NON-SCIENCE AND ENGINEERING FIELDS, RANKED BY ALL NON-S&E R&D, BY SUBFIELD: FY 2014 (FIRST 100 INSTITUTIONS) 86
- **APPENDIX O:** FEDERALLY FINANCED HIGHER EDUCATION R&D EXPENDITURES, RANKED BY ALL FEDERAL R&D EXPENDITURES, BY FEDERAL AGENCY FOR TOP 300 INSTITUTIONS: FY 2014 88

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TECHNICAL NOTE

The *FY2015 Annual Research and Development Expenditures Report (Expanded Version)* presents information on the research and development expenditures for the University of Massachusetts System. This expanded version includes additional highlights as well as national rankings and comparison data based on FY2014 figures.

The NSF Survey Definition for Research and development (R&D) is “creative work conducted systematically to increase the stock of knowledge (research) and to use this stock of knowledge to devise new applications (development). R&D covers three activities defined below—basic research, applied research, and development.”

- Basic research is undertaken primarily to acquire new knowledge without any particular application or use in mind.
- Applied research is conducted to gain the knowledge or understanding to meet a specific, recognized need.
- Development is the systematic use of the knowledge or understanding gained from research directed toward the production of useful materials, devices, systems, or methods, including the design and development of prototypes and processes.

R&D Expenditures – (What to Include) - For purposes of the HERD survey, R&D includes expenditures for organized research as defined by 2 CFR 200 Appendix III and expenditures from funds designated for research.

R&D <i>includes</i> :	R&D does <i>not</i> include:
<ul style="list-style-type: none"> • Sponsored research (federal and nonfederal) • University research (institutional funds that are separately budgeted for individual R&D projects) • Startup, bridge, or seed funding provided to researchers within your institution • Other departmental funds designated for research • Recovered and unrecovered indirect costs (see definitions in Question 1) • Equipment purchased from R&D project accounts • R&D funds passed through to a sub-recipient organization, educational or other • Clinical trials, Phases I, II, or III (see definition in Question 5) • Research training grants funding work on organized research projects • Tuition remission provided to students working on research 	<ul style="list-style-type: none"> • Public service grants or outreach programs • Curriculum development (unless included as part of an overall research project) • R&D conducted by university faculty or staff at outside institutions that is not accounted for in your financial records • Estimates of the proportion of time budgeted for instruction that is spent on research • Capital projects (i.e., construction or renovation of research facilities) • Non-research training grants • Unrecovered indirect costs that exceed your institution’s federally negotiated Facilities and Administrative (F&A) rate

Source: FY 2015 HERD Survey

Adam Collins
IR Analyst

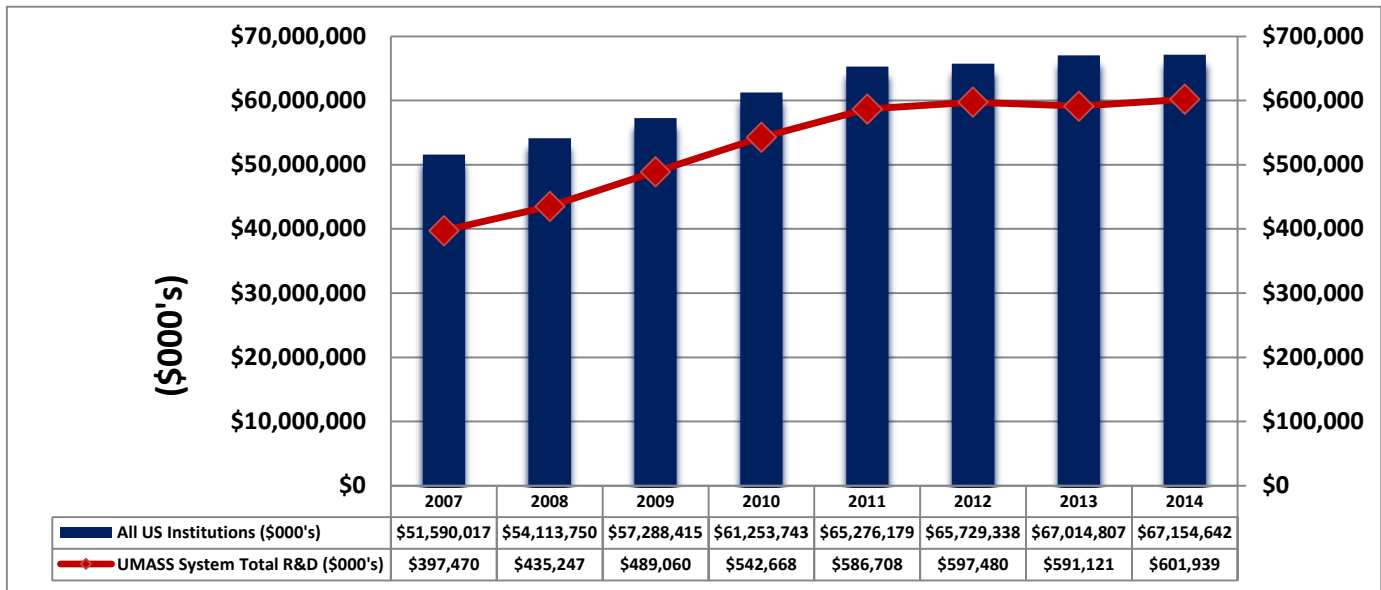
Neena Verma
Director of Institutional Research

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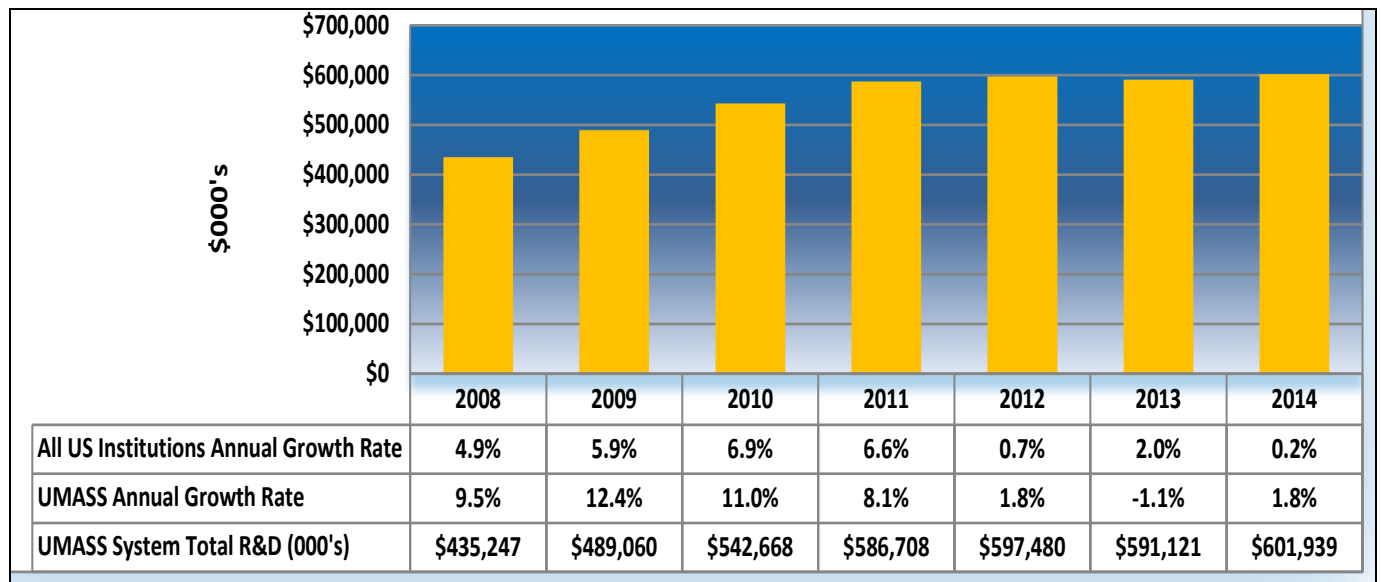
EXECUTIVE SUMMARY

- UMASS Total R&D Expenditures** - Total FY2015 R&D Expenditures for the University of Massachusetts System was reported at \$628.8 million, which represents a 4.3 percent increase from the FY2014 total of \$601.9 million.
- UMASS versus All U.S. Institutions - Total R&D Expenditures and Growth.** Between FY2007-FY2014, UMASS showed higher or similar annual growth rates in Total R&D Expenditures in comparison to national trends for all years except FY2013, when the growth rate for UMASS declined by (-1%) in the face of 2% U.S. growth.



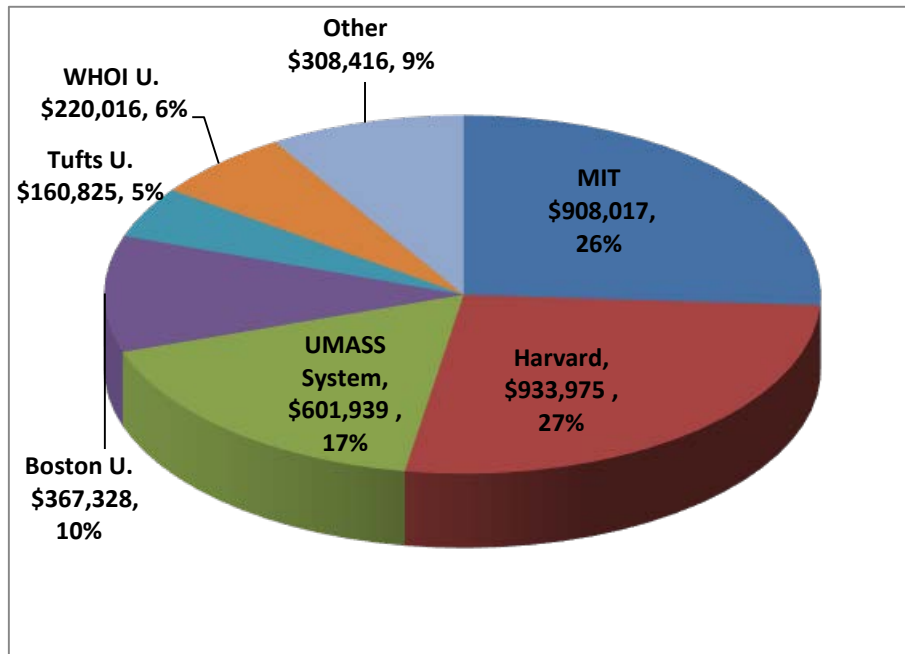
*Total R&D Expenditures: UMASS versus All U.S. Institutions
As Percent of all MA Institutions, FY2007-FY2014*

FY2014 saw a slight growth in Total R&D for UMASS of (2%). Despite cuts in federal R&D monies overall, UMASS R&D continued to grow, albeit at a slower pace.



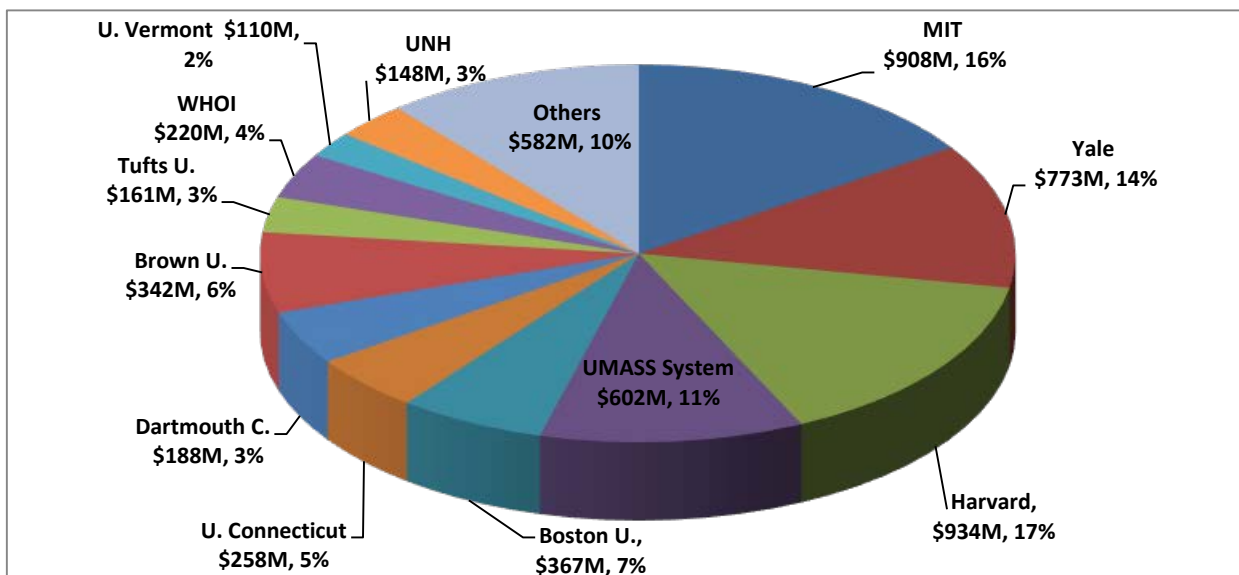
*Total R&D Expenditures: UMASS System (FY2008 – FY2014)
With Comparative Annual Growth for UMASS and All U.S. Institutions (FY2008-FY2014)*

- **UMASS Total R&D Expenditures as Percent of MA Institutions** - Based on FY 2014 data, the UMASS System comprised 17% of the Total R&D Expenditures for Massachusetts institutions.



*Total R&D Expenditures: UMASS System and Select Institutions
As Percent of all MA Institutions, FY 2014 (Dollars in Thousands)*

- **UMASS State Ranking in Total R&D Expenditures** - Among Massachusetts colleges and universities, UMASS ranks 3rd in Total R&D Expenditures. UMass, MIT, Harvard, and BU together account for 80% of the academic R&D Expenditures in the state. (Rankings based on FY 2014 data).
- **UMASS Total R&D Expenditures as Percent of New England Institutions** – Based on FY 2014 data, the UMASS System comprises 11% of the Total R&D Expenditures for New England institutions.



*Total R&D Expenditures: UMASS System and Select Institutions
As Percent of All New England Institutions (FY 2014)*

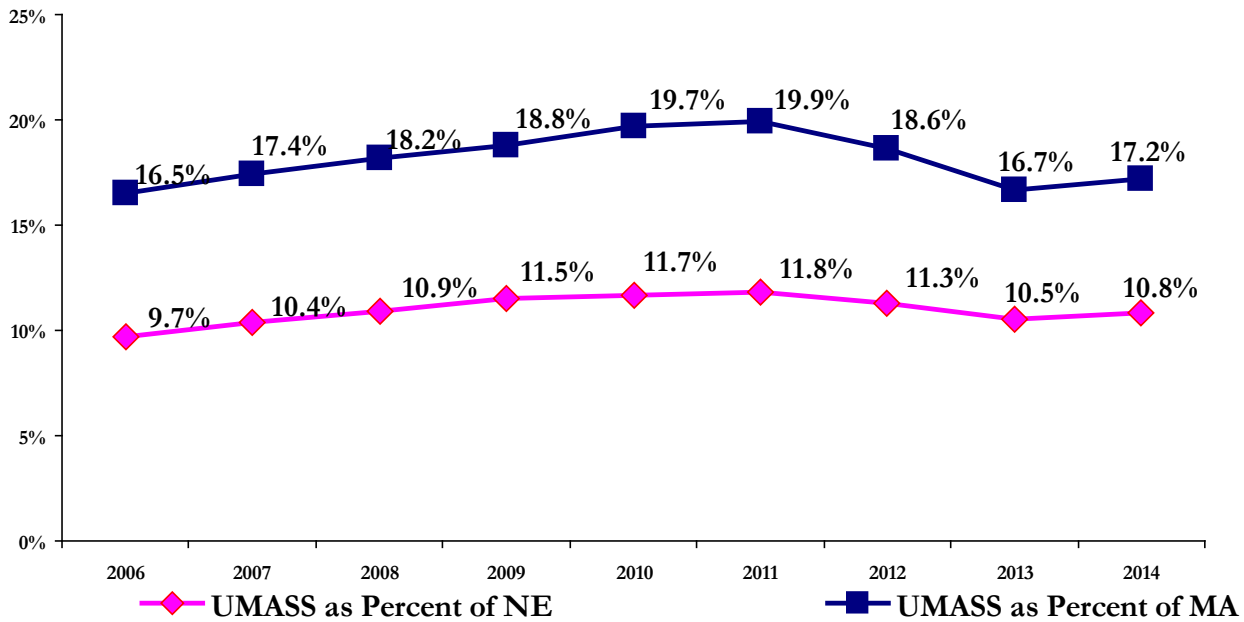
- **UMASS ranks 4th among all New England universities and colleges (FY 2014)** – Among all New England academic institutions, UMASS ranks 4th, only behind MIT, Yale, and Harvard. UMASS is the leader among New England public university systems, with Total R&D Expenditures (\$602M) larger than the next three public university systems (UConn, UNH, and University of Vermont) combined (\$516M). Rankings based on FY2014 data.
- **UMASS R&D Expenditures by Funding Source (FY2015)** – In terms of funding sources, 57% is from the federal government, 28% is from institutional sources, 7% is from state and local government, 4% from businesses, 5% from non-profit organizations, and 1% is from other sources (e.g., private foundations).
- **UMASS Areas of Funding Growth** – Between the reporting cycles FY2014-15, industry/business sponsorship grew slightly from 8% to 9%, and institutional funding stayed stable at 28%. State and local government funding grew from 4% to 7% of all funds. As anticipated, federal funding continued its downward trend, dropping again this year from 60% to 57%.
- **Life Sciences continues to comprise more than half of all R&D Expenditures at UMASS** - At \$357.8 million, life sciences constitute more than half of UMass’s total R&D expenditures (57%).
FY2015 distribution of R&D expenditures by field is:

Life Sciences	56.9%	Social Sciences	2.9%
Physical Sciences	8.1%	Non Sciences/Engineering	11.0%
Engineering	10.3%	Psychology	1.8%
Computer Sciences	4.2%	Mathematical Sciences	0.6%
Environmental Sciences	3.3%	Other Sciences	0.8%

Additional Highlights for UMASS and UMASS Campuses

I. UMASS Total R&D Expenditures As Percent of All New England and Massachusetts Institutions

- The University of Massachusetts Total R&D Expenditures has grown consistently over the past few years, keeping pace with R&D growth in MA overall. In FY 2006, UMass R&D Expenditures constituted 16.5% of all of Massachusetts R&D Expenditures as compared to 17.2% in FY 2014, with interim years reflecting a higher proportion of the MA total. *[Appendix A1]*.
- The University of Massachusetts R&D Expenditures continues to grow as a proportion of total R&D Expenditures for MA as well as all New England institutions. In FY2006, UMASS R&D Expenditures 9.7% of all of New England R&D Expenditures as compared to 10.8% in FY2014. *[Appendix A1]*.



UMASS Total R&D Expenditures as Percent of MA and New England

- When compared to the New England region, UMASS performance in R&D Expenditures varies by field. The top field in this arena has been Non-Science and Engineering at 17% of all New England institutions' R&D Expenditures, followed by Math and Computer Science as well as Life Sciences (13%), Physical Sciences (12%), Psychology (10%), Social Sciences (8%), and Engineering (7%). When compared to institutions in Massachusetts, the top performing fields for UMASS R&D Expenditures are Non-Science and Engineering (24%) and Life Sciences (24%), Psychology (19%), Math & Computer Sciences (18%), and Physical Sciences (17%), and Social Sciences (11%), *[Appendix A2]*.

II. NSF Research and Development Expenditures Rankings Based on FY2014 and Past Trends

UMASS System Ranking

- The University of Massachusetts System ranked 33rd nationally, with a total of \$601.9M in Total R&D Expenditures (Among the top 5% in rankings nationwide), and 20th among all US Publics. [*Appendix B1, B2*].¹

UMASS Campuses – Total R&D Expenditures Rankings (Among ALL and Public Institutions)

- With \$242M, UMass Medical School ranked 87th nationally in Total R&D Expenditures from a total of 634 ranked institutions nationwide (among the top 14% in rankings). Among Public institutions, UMass Medical School ranked 58th [FY2014, *Appendix B1, Appendix B2*].
- With \$191M, UMass Amherst ranked 102nd nationally in Total R&D Expenditures from a total of 634 ranked institutions nationwide (among the top 16% in rankings). UMass Amherst ranked 71st among public institutions and 66th among Non-Medical school R&D Expenditures [FY2014, *Appendix B1, Appendix B2, Appendix E*].
- With \$65M in Total R&D Expenditures in FY 2014, UMass Lowell ranked 172nd out of the 634 ranked academic institutions in the NSF HERD Survey (among the top 27% in rankings). UMass Lowell ranked 124th among public institutions and 150th among Non-Medical school R&D Expenditures [FY2014, *Appendix B1, Appendix B2, Appendix E*].
- With \$61M in Total R&D Expenditures in FY2014, UMass Boston ranked 177th out of 634 ranked institutions (Among the top 28% in rankings). UMass Boston ranked 128th among public institutions and 153rd among Non-Medical school R&D Expenditures [FY2014, *Appendix B1, Appendix B2, Appendix E*].
- With \$28M in Total R&D Expenditures, UMass Dartmouth ranked 233rd out of 634 ranked institutions (among the top 37% in rankings). UMass Dartmouth ranked 170th among public institutions and 206th among Non-Medical school R&D Expenditures [FY2014, *Appendix B1, Appendix B2, Appendix E*].

UMass Campuses – Prominent Rankings

- UMass Amherst has consistently ranked among the top 25 universities and colleges nationwide in total R&D Expenditures in the Computer Science field. In FY 2014, UMass Amherst ranked 25th among the first 100 institutions [*Appendix F*].
- UMass Boston has consistently ranked among the first 100 institutions for academic R&D Expenditures in the Social Sciences over the past five years. In FY 2014, UMass Boston ranked 88th [*Appendix M*].
- Over the past nine years, UMass Dartmouth's ranking has ranged 67th-79th among the first 100 institutions, for total academic R&D Expenditures in the Environmental Sciences. In FY 2014, UMass Dartmouth ranked 79th [*Appendix H*]. UMass Medical School's ranking for colleges and universities Total R&D Expenditures in Life

¹ University of Massachusetts System level ranking is a derived ranking.

- UMass Boston has been among the top ten in the country for Total R&D Expenditures in Education since FY 2011. In FY2014, UMass Boston ranked 10th in this category. *[Appendix N]*.
- UMass Boston has also consistently ranked among the top institutions for all Non-Science and Engineering. The institution's ranking in this category improved steadily from 33rd to 18th between FY2011-14. *[Appendix N]*.
- In FY2014, UMass Lowell ranked 83rd for all Non-Science and Engineering *[Appendix N]* and 96th in Computer Science *[Appendix F]*.
- UMass Medical School's ranking for colleges and universities Total R&D Expenditures in Life Sciences has consistently been high over the past six years. In FY2014, UMass Medical School had a ranking of 56th among the first 150 institutions in Life Sciences, and a ranking of 29th in Life Sciences among US Publics. *[Appendix I]*.

Additional Rankings

- UMass Amherst has consistently ranked among the first 100 universities and colleges in R&D Expenditures in Engineering over the past six years. UMass Amherst's ranked 66th in Engineering in FY2014 *[Appendix G]*.
- UMass Amherst has consistently ranked among the first 100 universities and colleges for R&D Expenditures in Mathematical Sciences. In FY 2014, UMass Amherst ranked 77th *[Appendix J]*.
- UMass Amherst has consistently ranked among the first 100 institutions for R&D Expenditures in the Physical Sciences. In FY 2014, UMass Amherst ranked 38th. UMass Lowell also ranked among the top 100 institutions (74th) in FY 2014 *[Appendix K]*.
- In FY 2014, UMass Boston ranked 94th and UMass Amherst ranked 67th among the first 100 universities and colleges in R&D Expenditures in Psychology *[Appendix L]*.

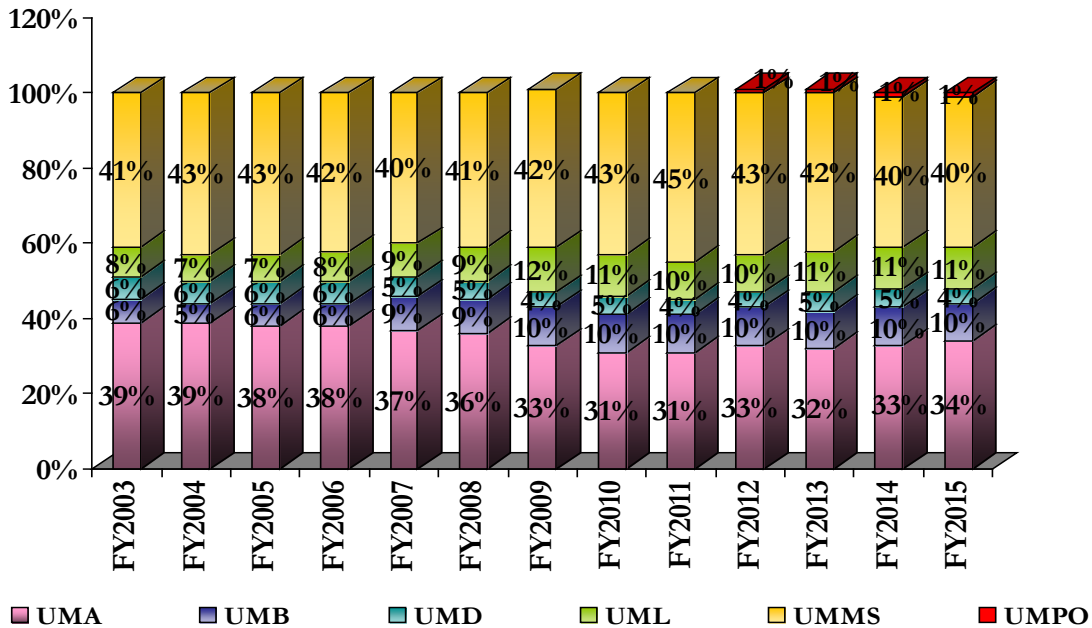
A. TOTAL R&D EXPENDITURES

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A. TOTAL R&D EXPENDITURES - FY2015

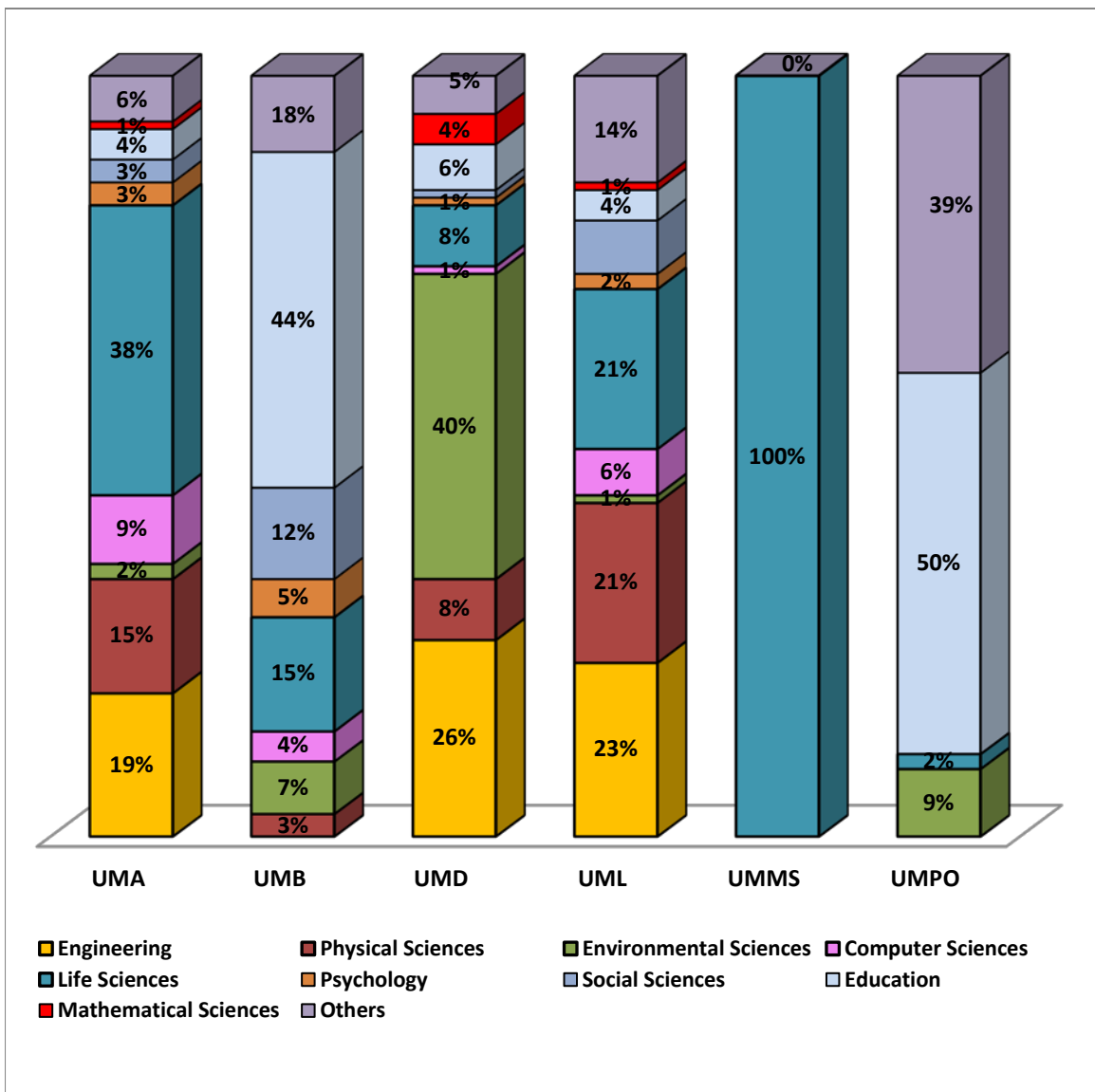
1. Total FY2015 R&D Expenditures for the University of Massachusetts System was reported at \$628.8 million, which represents a 4.3 percent increase from the FY2014 total of \$601.9 million.
2. UMass Campuses showed variation in growth rates over the past year. UMass Lowell R&D expenditures increased by 9 percent, followed by UMass Amherst at 6.7 percent, UMass Boston at 2 percent, and UMass Medical School at 3.5 percent. UMass Dartmouth R&D expenditures declined by -5.2 percent. Both UMass Amherst and UMass medical School continue to post impactful R&D expenditures figures, in the \$200-\$250 million range.
3. Within the UMASS System, two-fifths (40%) of the total R&D Expenditures is attributed to the UMass Medical School and a little over one-third (34%) to UMass Amherst.
4. The other campuses (UMass Boston, UMass Dartmouth and UMass Lowell) have gradually increased their proportion of the System Total R&D Expenditures, from 20% in FY2003 to 25% in FY2015.
5. The UMass President's Office reported R&D Expenditures to NSF for the fourth time in FY2015, and contributed \$5.056 million to the University's Total R&D monies.

UMASS Campuses and President's Office Total R&D Expenditures



5. R&D expenditures activities at UMass campuses vary by field. In FY2015, while UMass Amherst's top three R&D Expenditures areas were Life Sciences (38%), Engineering (19%), and Physical Sciences (15%), UMass Boston's concentration was primarily in Education (44%), Life Sciences (15%), the Social Sciences (12%), and Psychology (5%). UMass Dartmouth's major areas of concentration were in the fields of Environmental Sciences (40%) and Engineering (26%), and for UMass Lowell, Physical Sciences (21%) and Engineering (23%). The UMass Medical School had 100% of its R&D Expenditures in the Life Sciences. The UMass President's Office research contributions were primarily in Education (50%).

UMass Campuses: Total R&D Expenditures by Field (FY2015)



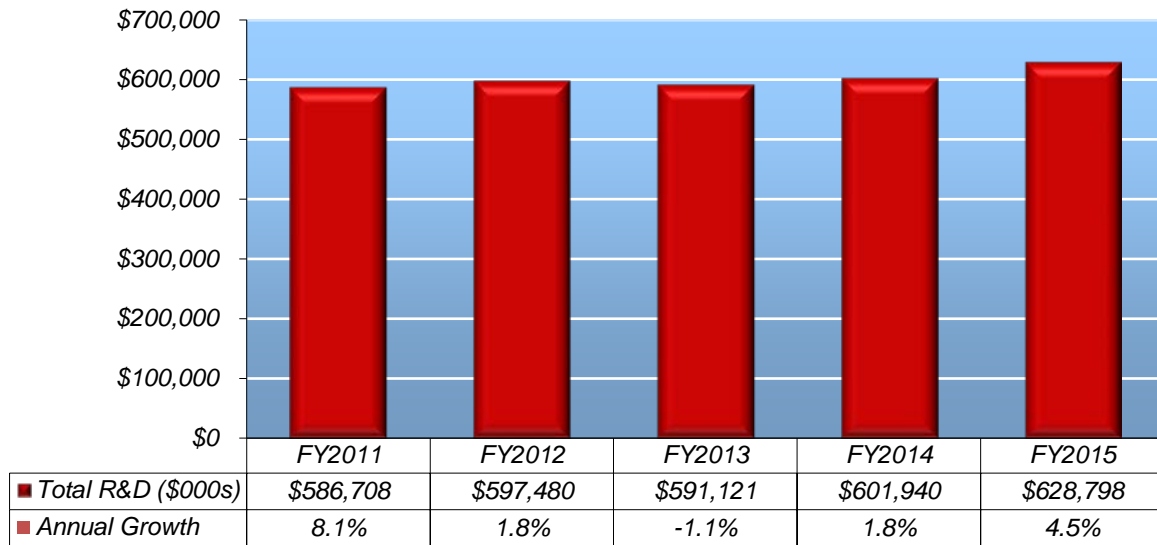
A. TOTAL R&D EXPENDITURES

DATA AND CHARTS

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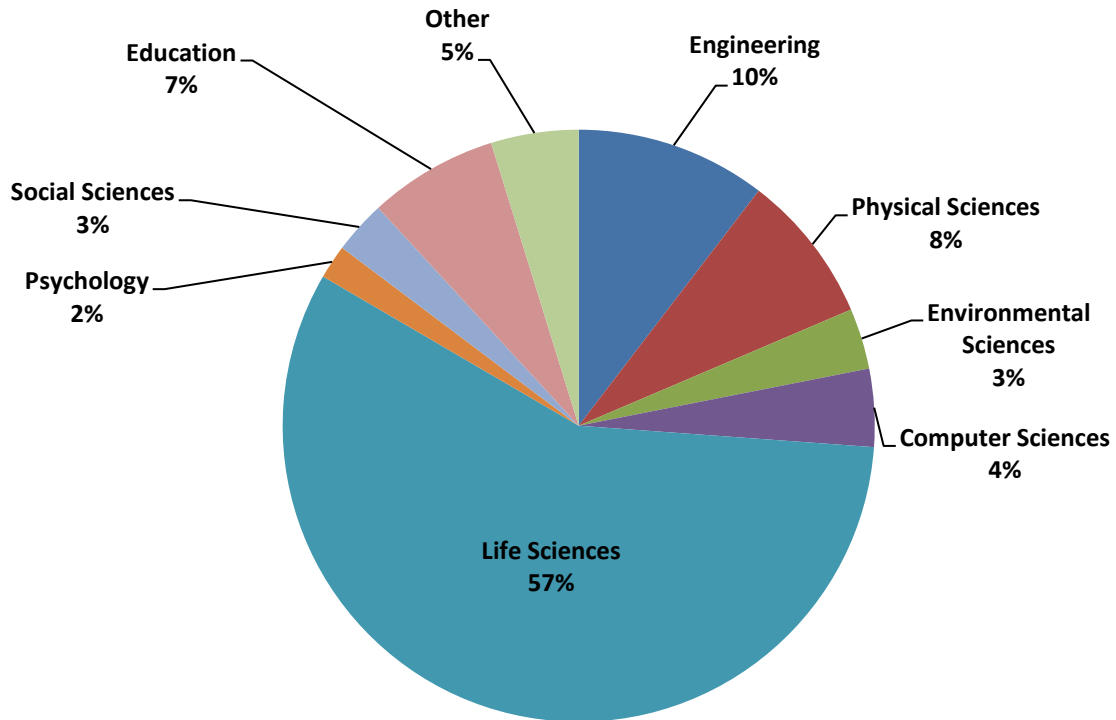
UMASS System

Total R&D Expenditures FY2011 - FY2015



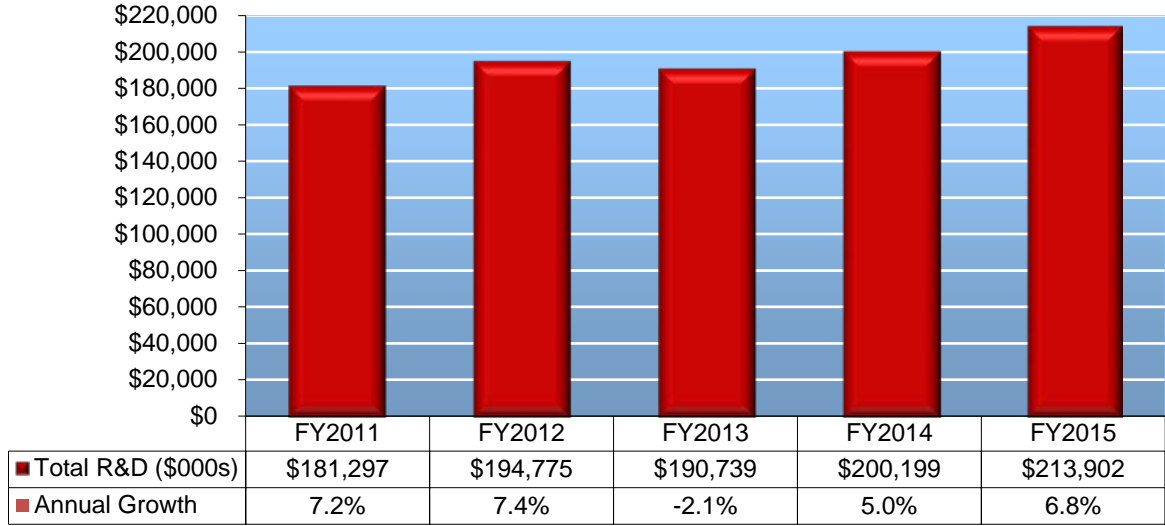
Please Note: UMB revised its Total R&D Expenditures for FY14. System figures have been updated accordingly.

Total R&D Expenditures FY2015

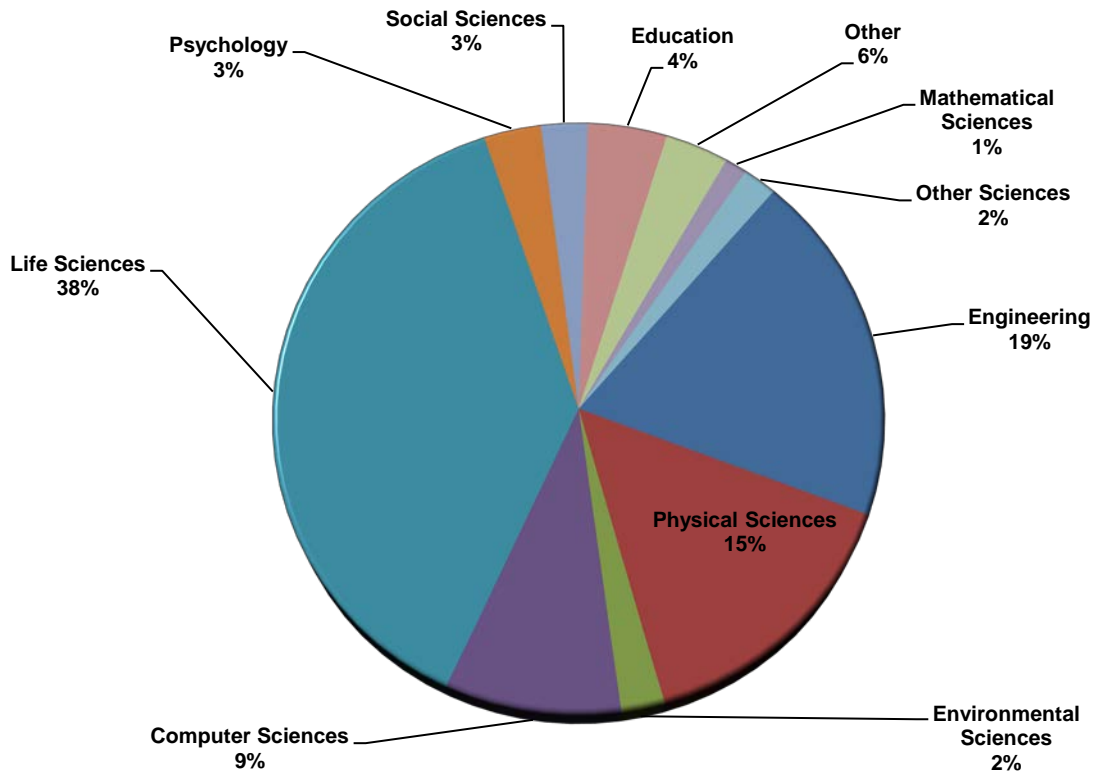


Amherst

Total R&D Expenditures FY2011 - FY2015

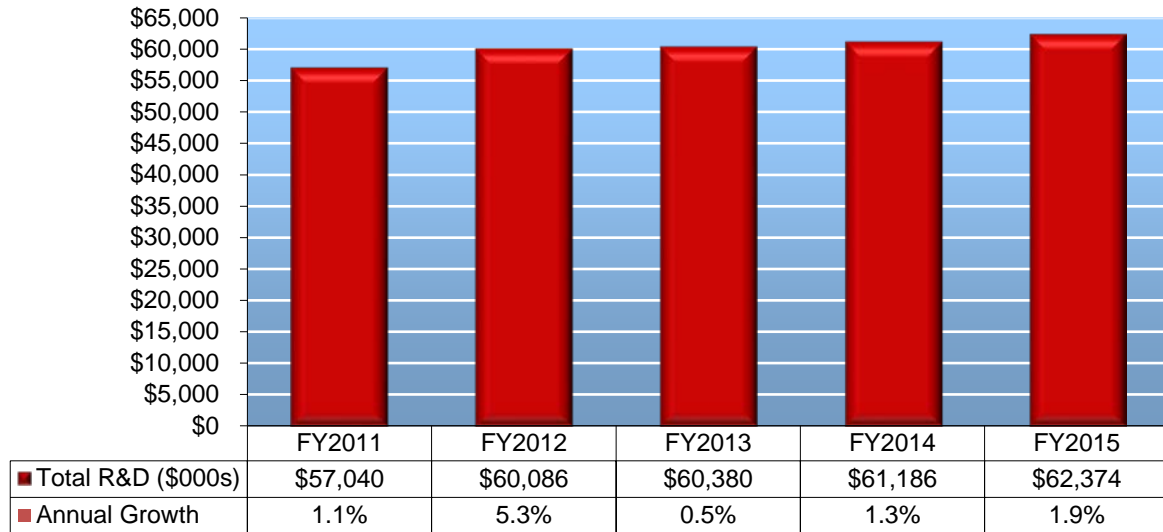


Total R&D Expenditures FY2015

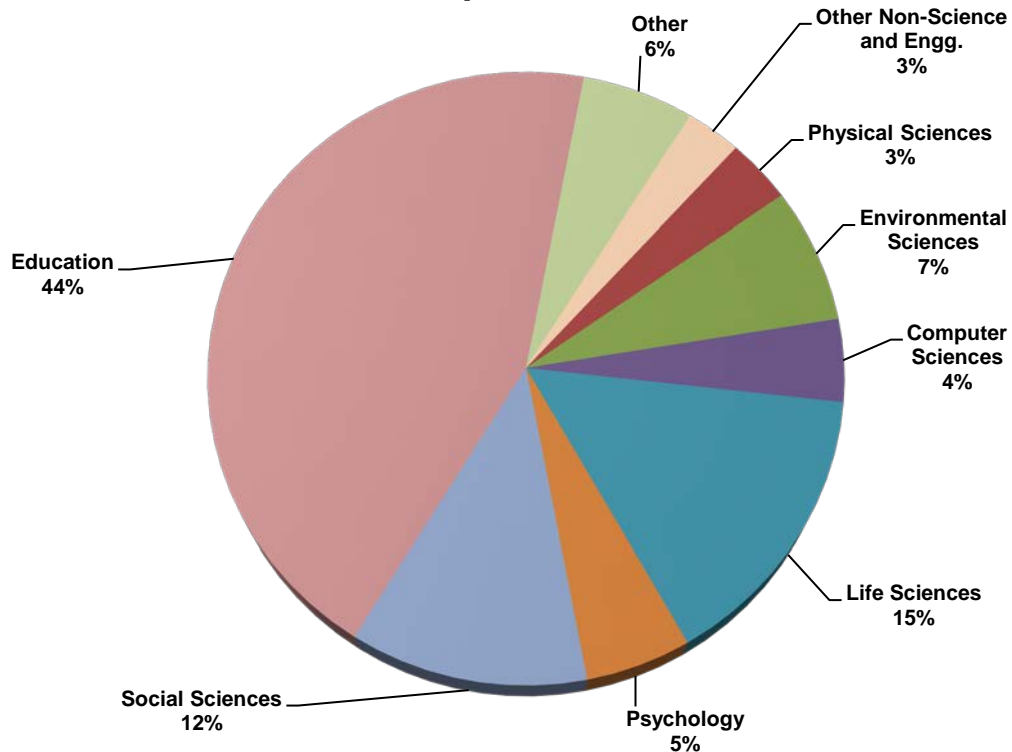


Boston

Total R&D Expenditures FY2011 - FY2015



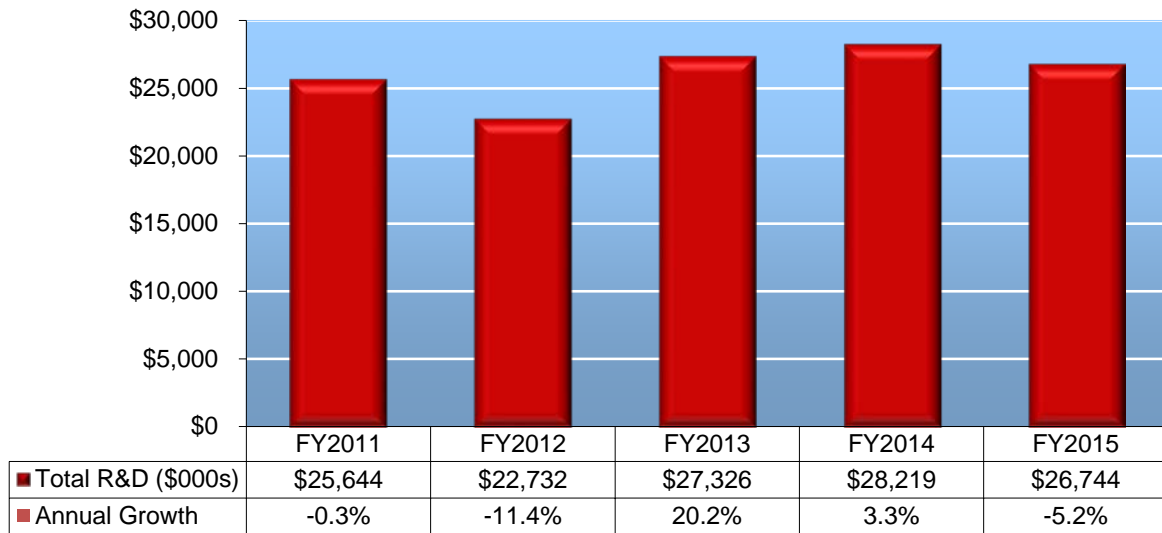
Total R&D Expenditures FY2015



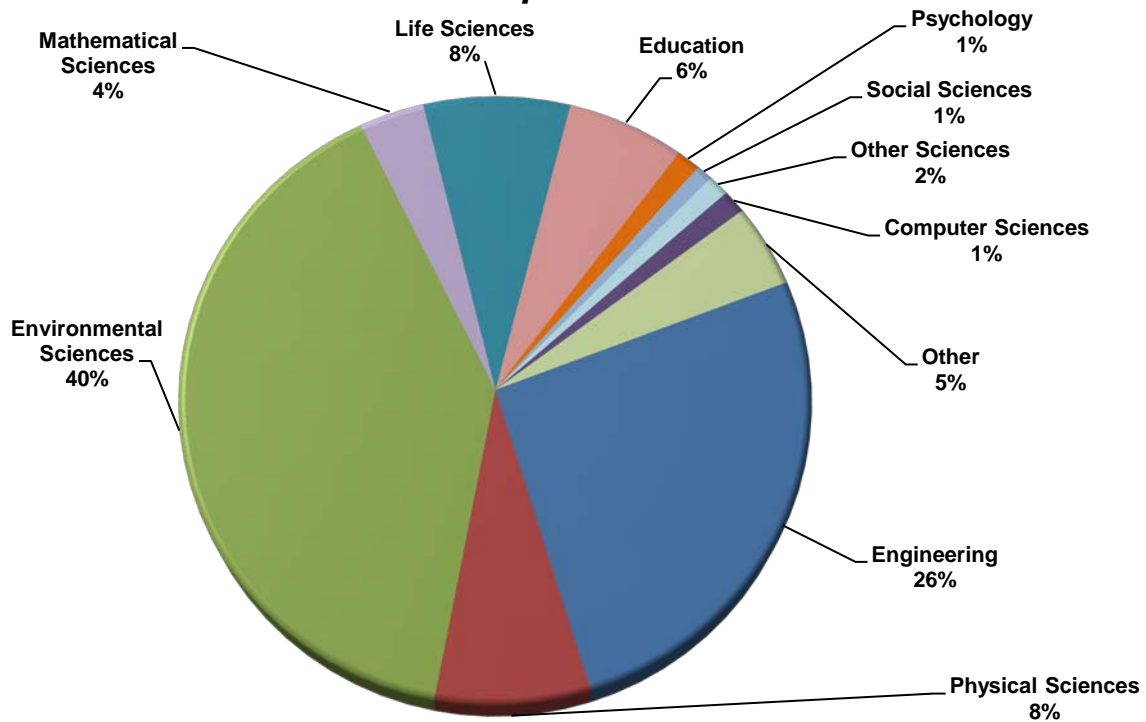
Please Note: UMB has revised its Total R&D Expenditures for FY14.

Dartmouth

Total R&D Expenditures FY2011 - FY2015



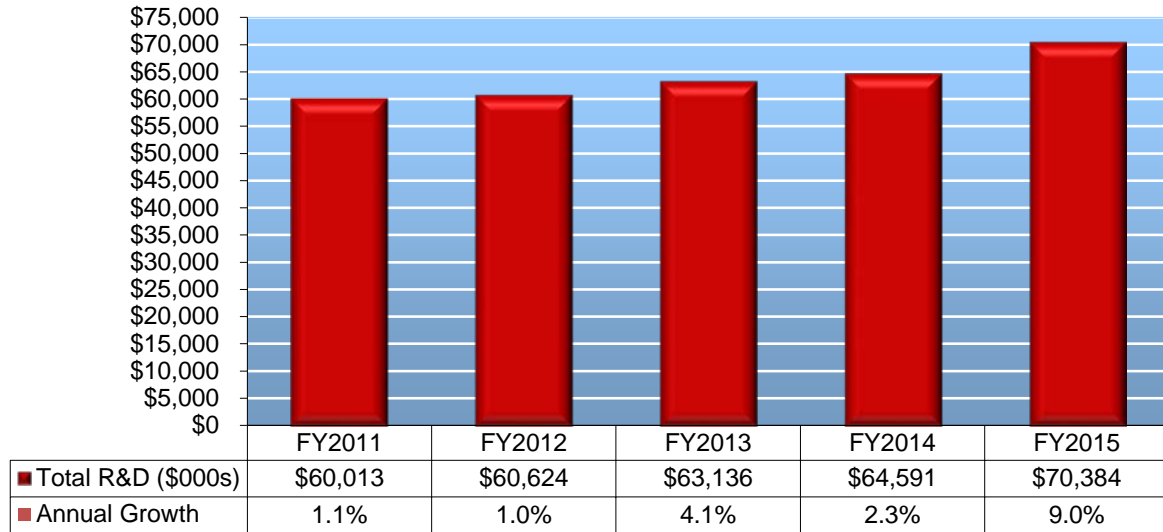
Total R&D Expenditures FY2015



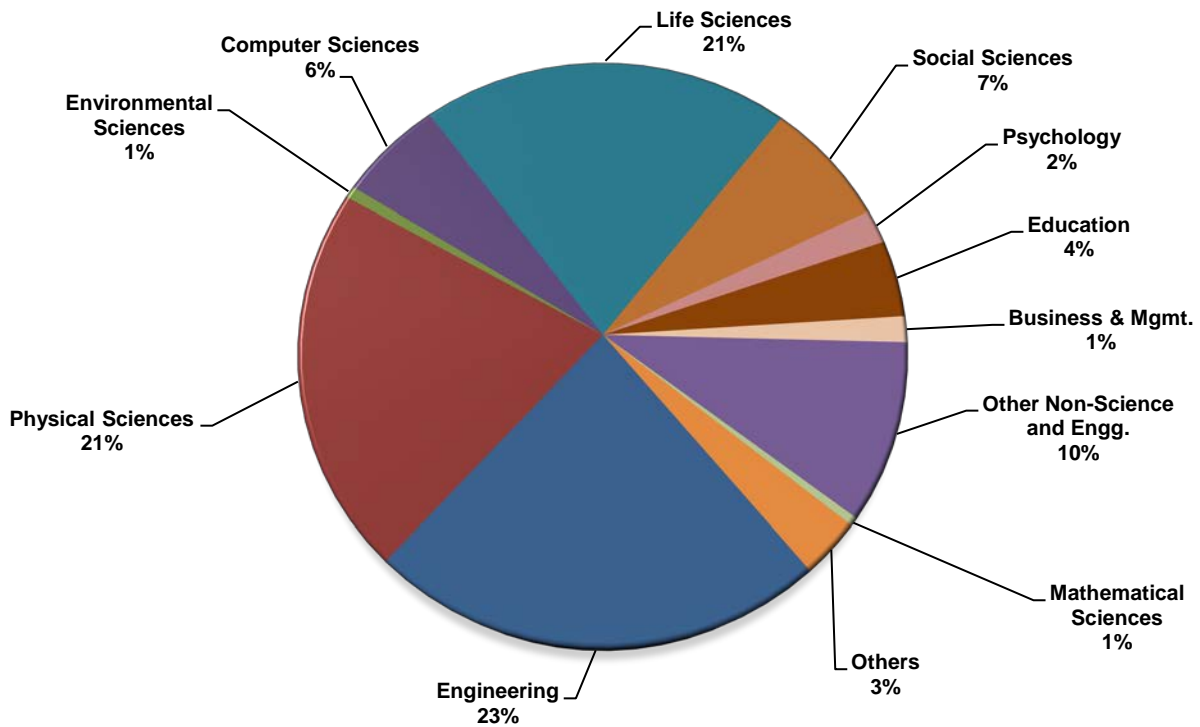
Total does not add to 100% due to rounding.

Lowell

Total R&D Expenditures FY2011 - FY2015

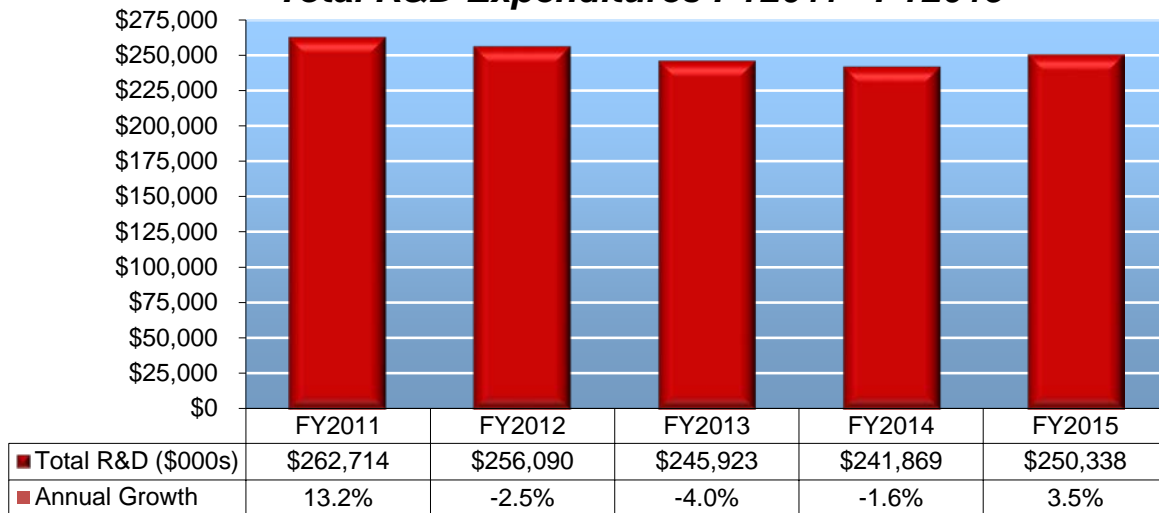


Total R&D Expenditures FY2015



Medical School

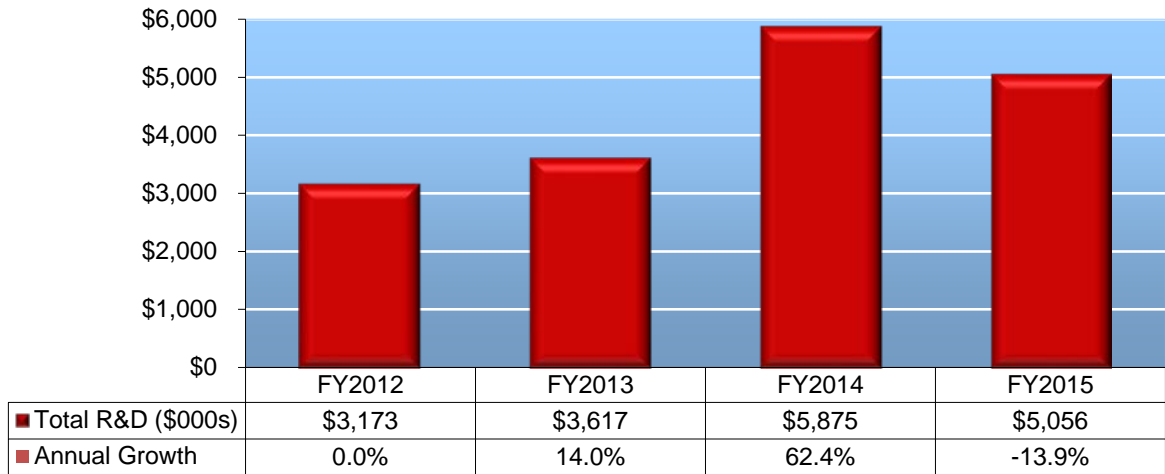
Total R&D Expenditures FY2011 - FY2015



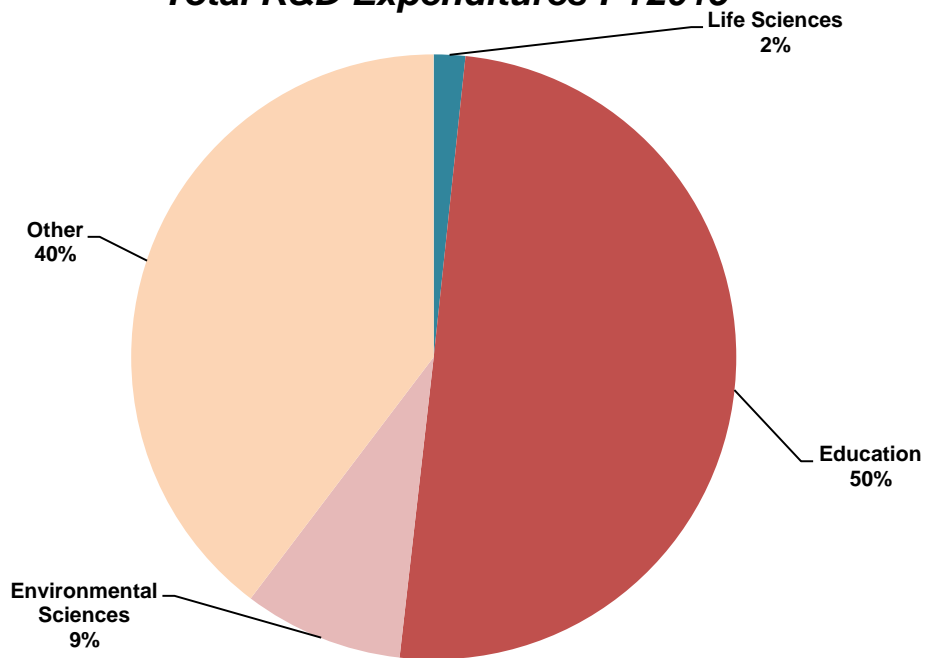
All of the Medical School's R&D expenditures are in the Life Sciences.

President's Office

Total R&D Expenditures FY2012 - FY2015



President's Office **Total R&D Expenditures FY2015**



Total does not add to 100% due to rounding.

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B. R&D EXPENDITURES by FIELD
ADDITIONAL CAMPUS DETAILS

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FY 2015 Total R&D Expenditures by Field (Federal and Non-Federal)

FIELD	UMA					UMB				
	Federal	Non-Federal	UMA Total	% of UMA Total	% of Field	Federal	Non-Federal	UMB Total	% of UMB Total	% of Field
Engineering (Total)	\$21,158	\$20,232	\$41,390	19.3%	63.7%	\$250	\$183	\$433	0.7%	0.7%
Aeronautical & Astronomical	\$17	\$10	\$27	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%
Bioengineering/Biomedical	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%
Chemical	\$5,686	\$4,671	\$10,357	4.8%	62.8%	\$0	\$0	\$0	0.0%	0.0%
Civil	\$4,972	\$7,103	\$12,075	5.6%	81.5%	\$30	\$8	\$38	0.1%	0.0%
Electrical	\$6,797	\$4,708	\$11,505	5.4%	58.3%	\$220	\$175	\$395	0.6%	2.0%
Mechanical	\$3,535	\$3,461	\$6,996	3.3%	61.4%	\$0	\$0	\$0	0.0%	0.0%
Metallurgical & Materials	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%
Other	\$151	\$279	\$430	0.2%	29.9%	\$0	\$0	\$0	0.0%	0.0%
Physical Sciences (Total)	\$19,630	\$12,201	\$31,831	14.9%	62.3%	\$1,651	\$496	\$2,147	3.4%	4.2%
Astronomy	\$2,122	\$1,075	\$3,197	1.5%	96.5%	\$0	\$0	\$0	0.0%	0.0%
Chemistry	\$9,061	\$6,347	\$15,408	7.2%	67.7%	\$871	\$396	\$1,267	2.0%	5.6%
Physics	\$8,447	\$4,779	\$13,226	6.2%	52.8%	\$780	\$100	\$880	1.4%	3.5%
Other	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%
Environmental Sciences (Total)	\$2,980	\$1,774	\$4,754	2.2%	22.9%	\$3,163	\$1,300	\$4,463	7.2%	21.5%
Atmospheric	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%
Earth Sciences	\$2,980	\$1,766	\$4,746	2.2%	91.0%	\$0	\$0	\$0	0.0%	0.0%
Oceanography	\$0	\$0	\$0	0.0%	0.0%	\$3,130	\$1,071	\$4,201	6.7%	28.3%
Other	\$0	\$8	\$8	0.0%	1.1%	\$33	\$229	\$262	0.4%	37.4%
Mathematical Sciences (Total)	\$1,694	\$893	\$2,587	1.2%	67.2%	\$2	\$25	\$27	0.0%	0.7%
Computer Sciences (Total)	\$13,371	\$5,942	\$19,313	9.0%	72.7%	\$1,889	\$844	\$2,733	4.4%	10.3%
Life Sciences (Total)	\$32,353	\$48,812	\$81,165	37.9%	22.7%	\$4,949	\$4,413	\$9,362	15.0%	2.6%
Agricultural	\$14,100	\$10,815	\$24,915	11.6%	99.5%	\$124	\$0	\$124	0.2%	0.0%
Biological	\$11,562	\$8,440	\$20,002	9.4%	19.6%	\$2,188	\$1,117	\$3,305	5.3%	3.2%
Medical	\$5,239	\$6,792	\$12,031	5.6%	9.9%	\$21	\$1,337	\$1,358	2.2%	1.1%
Other	\$1,452	\$22,765	\$24,217	11.3%	22.2%	\$2,616	\$1,959	\$4,575	7.3%	4.2%
Psychology (Total)	\$3,810	\$2,872	\$6,682	3.1%	57.5%	\$1,566	\$1,689	\$3,255	5.2%	28.0%
Social Sciences (Total)	\$1,324	\$4,155	\$5,479	2.6%	30.3%	\$1,505	\$5,818	\$7,323	11.7%	40.5%
Economics	\$131	\$498	\$629	0.3%	42.9%	\$78	\$154	\$232	0.4%	15.8%
Political Science	\$398	\$824	\$1,222	0.6%	25.0%	\$53	\$3,334	\$3,387	5.4%	69.2%
Sociology	\$520	\$2,471	\$2,991	1.4%	47.4%	\$1,338	\$1,446	\$2,784	4.5%	44.1%
Other	\$275	\$362	\$637	0.3%	11.7%	\$36	\$884	\$920	1.5%	17.0%
Other Sciences (Total)	\$886	\$3,096	\$3,982	1.9%	82.0%	\$489	\$73	\$562	0.9%	0.0%
TOTAL, SCI & ENG FIELDS	\$97,206	\$99,977	\$197,183	92.2%	35.2%	\$15,464	\$14,841	\$30,305	48.6%	5.4%
FIELD	Federal	Non-Federal	UMA Total	% of UMA Total	% of Field	Federal	Non-Federal	UMB Total	% of UMB Total	% of Field
Education	\$5,010	\$4,256	\$9,266	4.3%	21.0%	\$12,882	\$14,720	\$27,602	44.3%	62.6%
Law	\$0	\$0	\$0	0.0%	#DIV/0!	\$0	\$0	\$0	0.0%	0.0%
Humanities	\$60	\$3,368	\$3,428	1.6%	67.5%	\$60	\$327	\$387	0.6%	7.6%
Visual and Performing Arts	\$6	\$132	\$138	0.1%	18.6%	\$0	\$51	\$51	0.1%	6.9%
Business and Management	\$254	\$1,311	\$1,565	0.7%	34.7%	\$0	\$1,637	\$1,637	2.6%	36.3%
Comm., Journalism & Library Sci	\$0	\$369	\$369	0.2%	75.5%	\$0	\$0	\$0	0.0%	0.0%
Social Work	\$107	\$99	\$206	0.0%	0.0%	\$247	\$323	\$570	0.9%	0.0%
Other Non-Science and Engin.	\$774	\$973	\$1,747	0.8%	13.0%	\$0	\$1,822	\$1,822	2.9%	13.6%
TOTAL, NON-SCI & ENG FIELDS	\$6,211	\$10,508	\$16,719	7.8%	24.2%	\$13,189	\$18,880	\$32,069	51.4%	46.4%
TOTAL, SCI & ENG FIELDS	\$97,206	\$99,977	\$197,183	92.2%	35.2%	\$15,464	\$14,841	\$30,305	48.6%	5.4%
GRAND TOTAL	\$103,417	\$110,485	\$213,902	100.0%		\$28,653	\$33,721	\$62,374	100.0%	9.9%

Source: Campus NSF HERD Surveys. All dollars are in thousands.

Note: Percent of Total is the percent each field represents of total campus or system R&D expenditures in all fields. Percent of Field is the percent of the UMass system's expenditures in a particular field represented by that campus.

FY 2015 Total R&D Expenditures by Field (Federal and Non-Federal) – Cont'd

FIELD	UMD					UML				
	Federal	Non-Federal	UMD Total	% of UMD Total	% of Field	Federal	Non-Federal	UML Total	% of UML Total	% of Field
Engineering (Total)	\$2,368	\$4,612	\$6,980	26.1%	10.7%	\$5,706	\$10,495	\$16,201	23.0%	24.9%
Aeronautical & Astronomical	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%
Bioengineering/Biomedical	\$302	\$798	\$1,100	4.1%	100.0%	\$0	\$0	\$0	0.0%	0.0%
Chemical	\$0	\$0	\$0	0.0%	0.0%	\$2,285	\$3,846	\$6,131	8.7%	37.2%
Civil	\$360	\$1,159	\$1,519	5.7%	10.3%	\$550	\$629	\$1,179	1.7%	8.0%
Electrical	\$1,231	\$1,932	\$3,163	11.8%	16.0%	\$1,478	\$3,210	\$4,688	6.7%	23.7%
Mechanical	\$475	\$536	\$1,011	3.8%	8.9%	\$1,393	\$1,985	\$3,378	4.8%	29.7%
Metallurgical & Materials	\$0	\$3	\$3	0.0%	100.0%	\$0	\$0	\$0	0.0%	0.0%
Other	\$0	\$184	\$184	0.7%	12.8%	\$0	\$825	\$825	1.2%	57.3%
Physical Sciences (Total)	\$586	\$1,481	\$2,067	7.7%	4.0%	\$10,573	\$4,512	\$15,085	21.4%	29.5%
Astronomy	\$0	\$116	\$116	0.4%	0.0%	\$0	\$0	\$0	0.0%	0.0%
Chemistry	\$470	\$1,065	\$1,535	5.7%	6.7%	\$2,664	\$1,886	\$4,550	6.5%	20.0%
Physics	\$116	\$300	\$416	1.6%	1.7%	\$7,909	\$2,626	\$10,535	15.0%	42.0%
Other	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%
Environmental Sciences (Total)	\$3,105	\$7,525	\$10,630	39.7%	51.2%	\$241	\$231	\$472	0.7%	2.3%
Atmospheric	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%
Earth Sciences	\$0	\$0	\$0	0.0%	0.0%	\$241	\$231	\$472	0.7%	9.0%
Oceanography	\$3,105	\$7,525	\$10,630	39.7%	71.7%	\$0	\$0	\$0	0.0%	0.0%
Other	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%
Mathematical Sciences (Total)	\$335	\$588	\$923	3.5%	24.0%	\$16	\$295	\$311	0.4%	8.1%
Computer Sciences (Total)	\$71	\$264	\$335	1.3%	1.3%	\$2,350	\$1,828	\$4,178	5.9%	15.7%
Life Sciences (Total)	\$603	\$1,472	\$2,075	7.8%	0.6%	\$7,984	\$6,786	\$14,770	21.0%	4.1%
Agricultural	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%
Biological	\$603	\$1,343	\$1,946	7.3%	1.9%	\$856	\$1,040	\$1,896	2.7%	1.9%
Medical	\$0	\$22	\$22	0.1%	0.0%	\$86	\$39	\$125	0.2%	0.1%
Other	\$0	\$107	\$107	0.4%	0.1%	\$7,042	\$5,707	\$12,749	18.1%	11.7%
Psychology (Total)	\$66	\$272	\$338	1.3%	2.9%	\$245	\$1,092	\$1,337	1.9%	11.5%
Social Sciences (Total)	\$0	\$231	\$231	0.9%	1.3%	\$1,883	\$3,186	\$5,069	7.2%	28.0%
Economics	\$0	\$0	\$0	0.0%	0.0%	\$0	\$606	\$606	0.9%	41.3%
Political Science	\$0	\$1	\$1	0.0%	0.0%	\$0	\$285	\$285	0.4%	5.8%
Sociology	\$0	\$228	\$228	0.9%	3.6%	\$0	\$312	\$312	0.4%	4.9%
Other	\$0	\$2	\$2	0.0%	0.0%	\$1,883	\$1,983	\$3,866	5.5%	71.3%
Other Sciences (Total)	\$0	\$302	\$302	1.1%	6.2%	\$0	\$12	\$12	0.0%	0.2%
TOTAL, SCI & ENG FIELDS	\$7,134	\$16,747	\$23,881	89.3%	4.3%	\$28,998	\$28,437	\$57,435	81.6%	10.3%
FIELD	Federal	Non-Federal	UMD Total	% of UMD Total	% of Field	Federal	Non-Federal	UML Total	% of UML Total	% of Field
Education	\$187	\$1,482	\$1,669	6.2%	3.8%	\$1,373	\$1,661	\$3,034	4.3%	6.9%
Law	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%
Humanities	\$0	\$30	\$30	0.1%	0.6%	\$0	\$1,237	\$1,237	1.8%	24.3%
Visual and Performing Arts	\$0	\$14	\$14	0.1%	1.9%	\$0	\$540	\$540	0.8%	72.7%
Business and Management	\$0	\$287	\$287	1.1%	6.4%	\$158	\$861	\$1,019	1.4%	22.6%
Comm., Journalism & Library Sci	\$0	\$0	\$0	0.0%	0.0%	\$0	\$108	\$108	0.2%	22.1%
Social Work	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%
Other Non-Science and Engin.	\$0	\$863	\$863	3.2%	6.4%	\$530	\$6,481	\$7,011	10.0%	52.2%
TOTAL, NON-SCI & ENG FIELDS	\$187	\$2,676	\$2,863	10.7%	4.1%	\$2,061	\$10,888	\$12,949	18.4%	18.7%
TOTAL, SCI & ENG FIELDS	\$7,134	\$16,747	\$23,881	89.3%	4.3%	\$28,998	\$28,437	\$57,435	81.6%	10.3%
GRAND TOTAL	\$7,321	\$19,423	\$26,744	100.0%	4.3%	\$31,059	\$39,325	\$70,384	100.0%	11.2%

Source: Campus NSF HERD Surveys. All dollars are in thousands.

Note: Percent of Total is the percent each field represents of total campus or system R&D expenditures in all fields. Percent of Field is the percent of the UMass system's expenditures in a particular field represented by that campus.

FY 2015 Total R&D ExpenFY 2015 Total R&D Expenditures by Field (Federal and Non-Federal) – Cont'd

FIELD	UMMS					UMPO					UMass System			
	Federal	Non-Federal	UMMS Total	% of UMMS	% of Field	Federal	Non-Federal	UMPO Total	% of UMPO	% of Field	Federal	Non-Federal	System Total	% of System
Engineering (Total)	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$29,482	\$35,522	\$65,004	10.3%
Aeronautical & Astronomical	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$17	\$10	\$27	0.0%
Bioengineering/Biomedical	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$302	\$798	\$1,100	0.2%
Chemical	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$7,971	\$8,517	\$16,488	2.6%
Civil	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$5,912	\$8,899	\$14,811	2.4%
Electrical	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$9,726	\$10,025	\$19,751	3.1%
Mechanical	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$5,403	\$5,982	\$11,385	1.8%
Metallurgical & Materials	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$0	\$3	\$3	0.0%
Other	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$151	\$1,288	\$1,439	0.2%
Physical Sciences (Total)	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$32,440	\$18,690	\$51,130	8.1%
Astronomy	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$2,122	\$1,191	\$3,313	0.5%
Chemistry	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$13,066	\$9,694	\$22,760	3.6%
Physics	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$17,252	\$7,805	\$25,057	4.0%
Other	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%
Environmental Sciences (Total)	\$0	\$0	\$0	0.0%	0.0%	\$0	\$431	\$431	8.5%	2.1%	\$9,489	\$11,261	\$20,750	3.3%
Atmospheric	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%
Earth Sciences	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$3,221	\$1,997	\$5,218	0.8%
Oceanography	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$6,235	\$8,596	\$14,831	2.4%
Other	\$0	\$0	\$0	0.0%	0.0%	\$0	\$431	\$0	0.0%	0.0%	\$33	\$668	\$701	0.1%
Mathematical Sciences (Total)	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$2,047	\$1,801	\$3,848	0.6%
Computer Sciences (Total)	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$17,681	\$8,878	\$26,559	4.2%
Life Sciences (Total)	\$183,588	\$66,750	\$250,338	100.0%	70.0%	\$85	\$0	\$85	1.7%	0.0%	\$229,562	\$128,233	\$357,795	56.9%
Agricultural	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$14,224	\$10,815	\$25,039	4.0%
Biological	\$57,583	\$17,380	\$74,963	29.9%	73.4%	\$0	\$0	\$0	0.0%	0.0%	\$72,792	\$29,320	\$102,112	16.2%
Medical	\$76,173	\$31,890	\$108,063	43.2%	88.9%	\$0	\$0	\$0	0.0%	0.0%	\$81,519	\$40,080	\$121,599	19.3%
Other	\$49,832	\$17,480	\$67,312	26.9%	61.7%	\$85	\$0	\$85	2.4%	0.1%	\$61,027	\$48,018	\$109,045	17.3%
Psychology (Total)	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$5,687	\$5,925	\$11,612	1.8%
Social Sciences (Total)	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$4,712	\$13,390	\$18,102	2.9%
Economics	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$209	\$1,258	\$1,467	0.2%
Political Science	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$451	\$4,444	\$4,895	0.8%
Sociology	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$1,858	\$4,457	\$6,315	1.0%
Other	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$2,194	\$3,231	\$5,425	0.9%
Other Sciences (Total)	\$0	\$0	\$0	0.0%	0.0%	\$1	\$0	\$1	0.0%	0.0%	\$1,376	\$3,483	\$4,859	0.8%
TOTAL, SCI & ENG FIELDS	\$183,588	\$66,750	\$250,338	100.0%	44.7%	\$86	\$431	\$517	10.2%	0.1%	\$332,476	\$227,183	\$559,659	89.0%
FIELD	Federal	Non-Federal	UMW Total	% of UMW	% of Field	Federal	Non-Federal	UMPO Total	% of UMPO	% of Field	Federal	Non-Federal	UMass Total	% of Total
Education	\$0	\$0	\$0	0.0%	0.0%	\$1,298	\$1,236	\$2,534	50.1%	5.7%	\$20,750	\$23,355	\$44,105	7.0%
Law	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%
Humanities	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$120	\$4,962	\$5,082	0.8%
Visual and Performing Arts	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$6	\$737	\$743	0.1%
Business and Management	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$412	\$4,096	\$4,508	0.7%
Comm., Journalism & Library Sci	\$0	\$0	\$0	0.0%	0.0%	\$0	\$12	\$12	0.2%	2.5%	\$0	\$489	\$489	0.1%
Social Work	\$0	\$0	\$0	0.0%	0.0%	\$0	\$0	\$0	0.0%	0.0%	\$354	\$422	\$776	0.0%
Other Non-Science and Engin.	\$0	\$0	\$0	0.0%	0.0%	\$61	\$1,932	\$1,993	39.4%	14.8%	\$1,365	\$12,071	\$13,436	2.1%
TOTAL, NON-SCI & ENG FIELDS	\$0	\$0	\$0	0.0%	0.0%	\$1,359	\$3,180	\$4,539	89.8%	6.6%	\$23,007	\$46,132	\$69,139	11.0%
TOTAL, SCI & ENG FIELDS	\$183,588	\$66,750	\$250,338	100.0%	44.7%	\$86	\$431	\$517	10.2%	0.1%	\$332,476	\$227,183	\$559,659	89.0%
GRAND TOTAL	\$183,588	\$66,750	\$250,338	100.0%	39.8%	\$1,445	\$3,611	\$5,056	100.0%	0.8%	\$355,483	\$273,315	\$628,798	100.0%

Source: Campus NSF HERD Surveys. All dollars are in thousands.

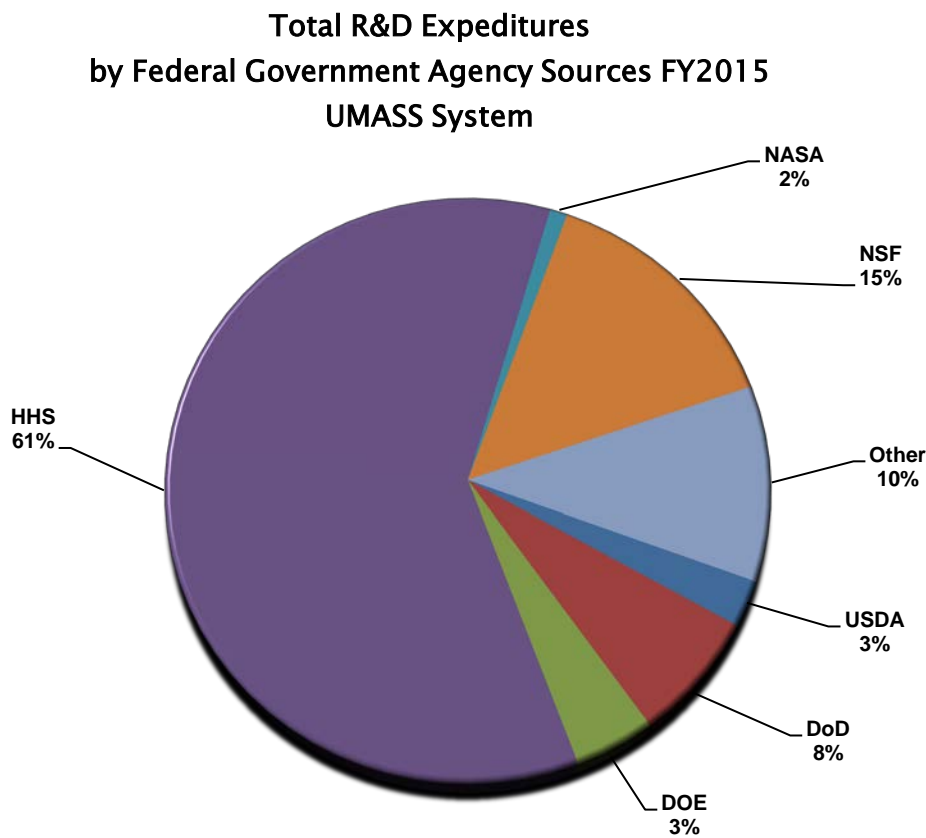
Note: Percent of Total is the percent each field represents of total campus or system R&D expenditures in all fields. Percent of Field is the percent of the UMass system's expenditures in a particular field represented by that campus.

B. R&D EXPENDITURES BY FIELD - ADDITIONAL CAMPUS DETAILS

1. There has been overall growth in R&D Expenditures over the past five years on all of the UMass Undergraduate campuses, with growth rates ranging from 4% to 18% between FY2011-FY2015. UMass Amherst and UMass Lowell reflected a growth of 17% and 18% respectively over this five-year period. UMass Boston R&D Expenditures grew by 9% and UMass Dartmouth by 4%. The UMass Medical School saw a 4% decline, and the UMass System as a whole reflected an overall growth of 7% in R&D Expenditures over the same time.
2. Each campus has its unique strengths in certain fields, as evidenced by their consistent national rankings in Top 100 institutions in a wide array of fields, including Computer Science, Engineering, Physical Science, Psychology, Environmental Science, Social Sciences, Mathematical Sciences, and Life Sciences. Together they create an extremely rich, strong, and diverse research program for the University system.
3. UMass Amherst reflects its strength in Computer Sciences, comprising 73% of the entire UMass System's R&D expenditures in this field, at over \$19M. In FY2014, UMass Amherst ranked **25th** among the first hundred institutions in total R&D Expenditures in the field of Computer Science (NSF Survey Rankings, Appendix F).
4. UMass Boston had the highest proportion of R&D Expenditures in Psychology and Education. In FY2014, UMass Boston R&D Expenditures in Social Sciences and Education comprised 40% and 59% (respectively) of the University total R&D expenditures in those fields.
5. UMass Dartmouth's prominence (among the UMass campuses) in Environmental Sciences is reflected by the fact that it comprises 51%, or \$11M of the total R&D Expenditures in this field. UMass Dartmouth has consistently ranked among the first hundred institutions for R&D Expenditures in the Environmental Sciences (NSF Survey). In FY2014, UMass Dartmouth ranked **79th** in this field (Appendix H).
6. Nearly half (46%) of UMass Lowell's R&D Expenditures in FY2015 were in the fields of Engineering and Physical Science. At \$16M, almost one-fourth of the University's R&D Expenditures in Engineering are sourced to the UMass Lowell campus. Nearly one-third (30% or \$15M) of the University's R&D Expenditures in Physical Sciences come from UMass Lowell as well.
7. For the UMass Medical School, 100% of R&D Expenditures is in the Life Sciences field. At \$242M, this comprises almost three-fourth's (72%) of the System total R&D Expenditures in the Life Sciences.

**B. 3. TOTAL R&D EXPENDITURES BY FEDERAL GOVERNMENT AGENCY SOURCES
(FY 2015)**

1. In FY2015, Total Federal R&D expenditures for the UMASS System was at \$356 million.
2. This comprises 57% of all R&D Expenditures for the UMASS System in FY2015.
3. In FY2015, the largest proportion of Federal R&D Expenditures to the UMASS System came from the Department of Health and Human Services (61%), followed by the National Science Foundation (15%), Department of Defense (8%), Department of Energy (3%), Department of Agriculture (3%), NASA (2%). All Other federal sources comprised 10% of total federal R&D expenditures for UMASS.



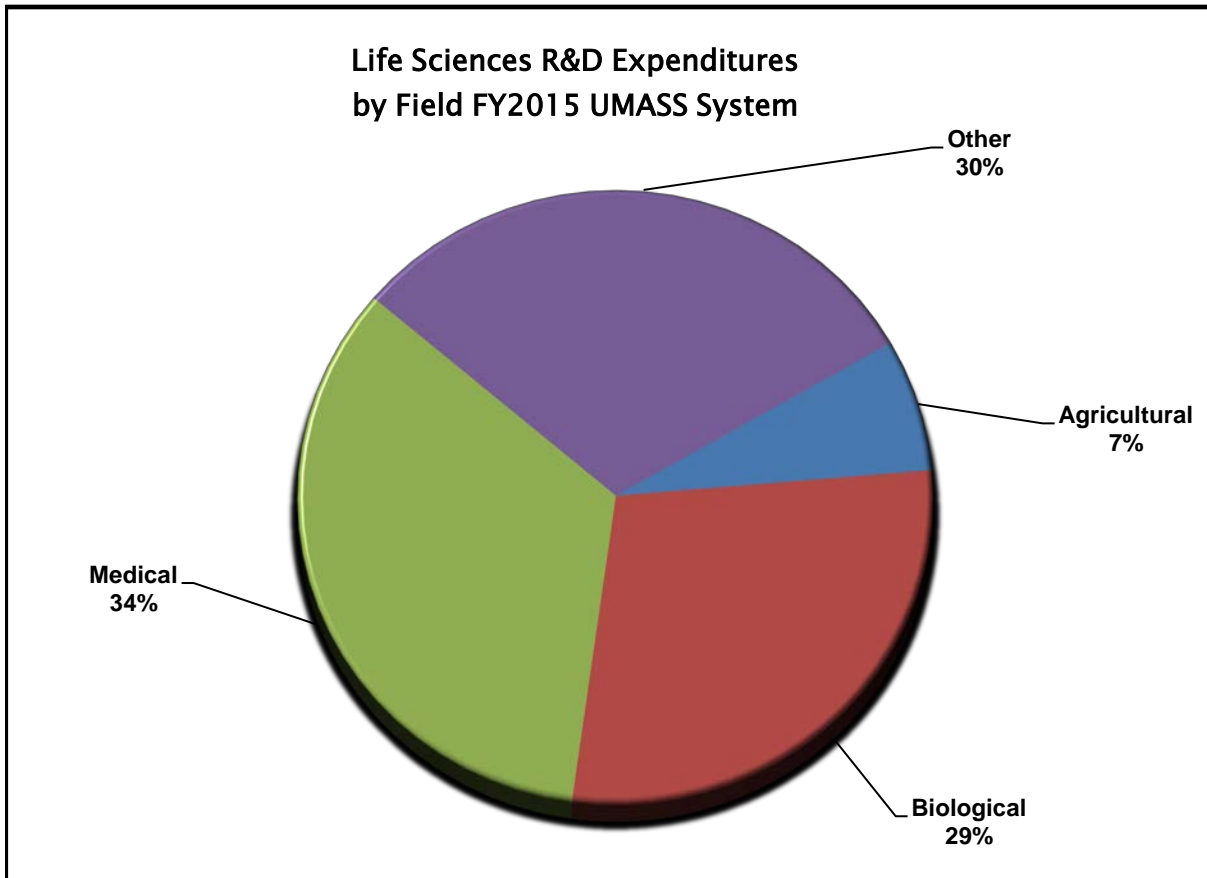
DOD - Department of Defense; DOE - Department of Energy; NASA - National Aeronautics and Space Administration; HHS - Health and Human Services; NSF - National Science Foundation; USDA - United States Department of Agriculture.

**C. LIFE SCIENCES
R&D EXPENDITURES**

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C. LIFE SCIENCES R&D EXPENDITURES

1. In FY 2015, R&D Expenditures in the Life Sciences for the UMASS System was at \$357.8 million, comprising well over half (56.9%) of total R&D Expenditures.
2. This represents a 4% increase from FY 2011, and a 6% increase from FY2014.
3. In FY 2015, 34% of all of the R&D Expenditures in the Life Sciences was within the Medical Sciences, followed by Biological Sciences (29%), Agricultural Sciences (7%), and all Others at (30%).



**Life Sciences R&D Expenditures by Field
FY2011 - FY2015**

(Dollars in Thousands)

	Total Life Sciences R&D									
	FY11	FY12	FY13	FY14	FY15	5-Year Change FY11 - FY15		1-Year Change FY14-FY15		
						\$	%	\$	%	
Amherst	\$58,946	\$61,999	\$60,743	\$69,749	\$81,165	\$22,219	38%	\$11,416	16%	
Boston	\$8,278	\$8,443	\$7,599	\$9,922	\$9,362	\$1,084	13%	-\$560	-6%	
Dartmouth	\$2,021	\$2,229	\$2,313	\$2,482	\$2,075	\$54	3%	-\$407	-16%	
Lowell	\$12,361	\$11,645	\$12,408	\$13,201	\$14,770	\$2,409	19%	\$1,569	12%	
Medical School	\$262,714	\$256,090	\$245,923	\$241,869	\$250,338	-\$12,376	-5%	\$8,469	4%	
President's Office	NA	\$402	\$94	\$135	\$85	NA	NA	-\$50	-37%	
System	\$344,320	\$340,808	\$329,080	\$337,358	\$357,795	\$13,475	4%	\$20,437	6%	

	Agricultural									
	FY11	FY12	FY13	FY14	FY15	5-Year Change FY11 - FY15		1-Year Change FY14-FY15		
						\$	%	\$	%	
Amherst	\$28,669	\$29,881	\$22,631	\$24,079	\$24,915	-\$3,754	-13%	\$836	3%	
Boston	\$0	\$0	\$0	\$0	\$124	\$124	NA	\$124	NA	
Dartmouth	\$946	\$1,170	\$809	\$202	\$0	-\$946	-100%	-\$202	-100%	
Lowell	\$0	\$0	\$0	\$0	\$0	\$0	NA	\$0	NA	
Medical School	\$0	\$0	\$0	\$0	\$0	\$0	NA	\$0	NA	
President's Office	\$0	\$0	\$0	\$0	\$0	NA	NA	\$0	NA	
System	\$29,615	\$31,051	\$23,440	\$24,281	\$25,039	-\$4,576	-15%	\$758	3%	

	Biological									
	FY11	FY12	FY13	FY14	FY15	5-Year Change FY11 - FY15		1-Year Change FY14-FY15		
						\$	%	\$	%	
Amherst	\$23,276	\$25,081	\$26,981	\$22,885	\$20,002	-\$3,274	-14%	-\$2,883	-13%	
Boston	\$2,581	\$2,773	\$2,592	\$2,913	\$3,305	\$724	28%	\$392	13%	
Dartmouth	\$1,004	\$938	\$1,503	\$2,219	\$1,946	\$942	94%	-\$273	-12%	
Lowell	\$1,553	\$1,999	\$1,470	\$1,837	\$1,896	\$343	22%	\$59	3%	
Medical School	\$88,359	\$91,140	\$77,287	\$80,169	\$74,963	-\$13,396	-15%	-\$5,206	-6%	
President's Office	NA	\$0	\$0	\$0	\$0	NA	NA	\$0	NA	
System	\$116,773	\$121,931	\$109,833	\$110,023	\$102,112	-\$14,661	-13%	-\$7,911	-7%	

**Life Sciences R&D Expenditures by Field
FY2011 - FY2015**

(Dollars in Thousands)

Medical									
	FY11	FY12	FY13	FY14	FY15	5-Year Change FY11 - FY15		1-Year Change FY14-FY15	
						\$	%	\$	%
						Amherst	\$6,473	\$6,276	\$9,661
Boston	\$4,675	\$4,345	\$812	\$2,294	\$1,358	-\$3,317	-71%	-\$936	-41%
Dartmouth	\$0	\$0	\$0	\$13	\$22	\$22	NA	\$9	NA
Lowell	\$252	\$0	\$47	\$113	\$125	-\$127	NA	\$12	11%
Medical School	\$133,598	\$127,032	\$121,754	\$107,810	\$108,063	-\$25,535	-19%	\$253	0%
President's Office	NA	\$263	\$44	\$75	\$0	NA	NA	-\$75	NA
System	\$144,998	\$137,916	\$132,318	\$124,186	\$121,599	-\$23,399	-16%	-\$2,587	-2%

Other									
	FY11	FY12	FY13	FY14	FY15	5-Year Change FY11 - FY15		1-Year Change FY14-FY15	
						\$	%	\$	%
						Amherst	\$528	\$761	\$1,470
Boston	\$1,022	\$1,325	\$4,195	\$4,715	\$4,575	\$3,553	348%	-\$140	-3%
Dartmouth	\$71	\$121	\$1	\$48	\$107	\$36	51%	\$59	123%
Lowell	\$10,556	\$9,646	\$10,891	\$11,251	\$12,749	\$2,193	21%	\$1,498	13%
Medical School	\$ 40,757	\$ 37,918	\$ 46,882	\$ 53,890	\$ 67,312	\$26,555	65%	\$13,422	25%
President's Office	NA	\$139	\$50	\$60	\$85	NA	NA	\$25	42%
System	\$52,934	\$49,910	\$63,489	\$78,868	\$109,045	\$56,111	106%	\$30,177	38%

Source: Campus NSF surveys and WebCASPAR. All dollars are in thousands.

Note: UMB FY2014 figures have been revised.

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Appendices

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Appendix A1: UMass Total R&D Expenditures as Percent of US, New England, Massachusetts Figures: FY 2009–2014

(Dollars in Thousands)						
Division and State	2009	2010	2011	2012	2013	2014
United States	\$57,288,415	\$61,257,398	\$65,282,162	\$65,744,254	\$67,041,154	\$67,154,642
New England	\$4,249,189	\$4,649,376	\$4,991,415	\$5,308,745	\$5,649,493	\$5,591,029
Connecticut	\$777,963	\$888,949	\$945,705	\$946,289	\$1,059,367	\$1,062,694
Maine	\$156,851	\$137,516	\$139,983	\$120,072	\$104,573	\$126,994
Massachusetts	\$2,605,290	\$2,749,926	\$2,949,264	\$3,214,549	\$3,532,767	\$3,500,516
New Hampshire	\$309,144	\$311,455	\$359,839	\$366,337	\$354,296	\$340,612
Rhode Island	\$274,425	\$428,738	\$459,321	\$493,428	\$477,381	\$445,664
Vermont	\$125,516	\$132,792	\$137,303	\$120,226	\$121,109	\$114,549
U. MA Worcester	\$204,033	\$232,039	\$262,714	\$256,090	\$245,923	\$241,869
U. MA Amherst	\$160,666	\$169,141	\$181,297	\$194,775	\$190,739	\$200,199
U. MA Lowell	\$56,664	\$59,345	\$60,013	\$60,624	\$63,136	\$64,592
U. MA Dartmouth	\$20,669	\$25,725	\$25,644	\$22,732	\$27,326	\$28,219
U. MA Boston	\$47,028	\$56,416	\$57,040	\$60,086	\$60,380	\$61,186
U. MA President's Office	-	-	-	\$3,173	\$3,617	\$5,875
UMass System Total	\$489,060	\$542,666	\$586,708	\$597,480	\$591,121	\$601,940
As % of US	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%
As % of New England	11.5%	11.7%	11.8%	11.3%	10.5%	10.8%
As % of MA	18.8%	19.7%	19.9%	18.6%	16.7%	17.2%

Appendix A2: UMass Total R&D Expenditures as Percent of US, New England, Massachusetts Figures by Field: FY 2014

(Dollars in Thousands)									
Division and State	Environmental sciences	Life sciences	Main and computer sciences	Physical sciences	Psychology	Social sciences	Sciences, nec	Engineering	All non-S&E fields
United States	3,248,721	37,921,244	2,584,934	4,616,578	1,140,755	2,210,253	1,046,264	10,973,790	3,412,103
New England	\$420,904	\$2,682,828	\$227,240	\$423,083	\$102,890	\$202,696	\$184,879	\$942,774	\$403,735
Connecticut	16,487	794,640	20,322	56,665	30,745	16,892	11,573	84,885	30,485
Maine	23,225	55,059	1,592	5,398	177	5,541	8,929	25,500	1,573
Massachusetts	269,897	1,402,700	162,579	313,206	53,789	148,868	135,067	732,252	282,158
New Hampshire	62,317	178,705	5,993	11,155	4,199	8,887	5,076	42,002	22,278
Rhode Island	47,839	161,889	34,465	34,632	10,882	21,741	17,417	50,396	66,403
Vermont	1,139	89,835	2,289	2,027	3,098	767	6,817	7,739	838
U. MA Worcester	\$0	\$241,869	\$0	\$0	\$0	\$0	\$0	\$0	\$0
U. MA Amherst	\$4,029	\$69,749	\$20,454	\$31,601	\$5,209	\$4,581	\$2,720	\$44,867	\$16,989
U. MA Lowell	\$417	\$13,202	\$4,762	\$15,373	\$1,220	\$4,082	\$0	\$13,540	\$11,996
U. MA Dartmouth	\$8,812	\$2,482	\$670	\$2,897	\$516	\$1,162	\$423	\$8,917	\$2,340
U. MA Boston	\$4,164	\$9,922	\$3,149	\$2,169	\$3,301	\$6,658	\$425	\$233	\$31,165
U. MA President's Office	\$154	\$135	\$0	\$0	\$0	\$0	\$50	\$0	\$5,536
UMass System Total	\$17,576	\$337,359	\$29,035	\$52,040	\$10,246	\$16,483	\$3,618	\$67,557	\$68,026
As % of US	0.5%	0.9%	1.1%	2.0%	0.2%	1.4%	0.2%	6.5%	0.6%
As % of New England	4.2%	12.6%	12.8%	12.3%	10.0%	8.1%	2.0%	7.2%	16.8%
As % of MA	6.5%	24.1%	17.9%	16.6%	19.0%	11.1%	2.7%	9.2%	24.1%

SOURCE: National Science Foundation/Division of Science Resources Statistics, Survey of Research and Development Expenditures at Universities and Colleges, FY 2014.

Appendix B₁. Higher Education R&D Expenditures, ranked by FY 2014 Total R&D Expenditures: FYs 2005–14 (Top 300 Institutions)

(Dollars in thousands)

Rank	Institution	2007	2008	2009	2010	2011	2012	2013	2014
	All institutions	51,590,017	54,113,750	57,288,415	61,253,743	65,276,179	65,729,338	67,014,807	67,154,642
1	Johns Hopkins U. ^a	1,566,392	1,691,469	1,866,243	2,004,482	2,145,308	2,106,185	2,168,568	2,242,478
2	U. Michigan, Ann Arbor	NA	NA	NA	1,184,445	1,279,123	1,322,711	1,375,117	1,349,262
3	U. Washington, Seattle	NA	NA	NA	1,022,740	1,148,533	1,109,008	1,192,513	1,176,340
4	U. Wisconsin-Madison	912,219	944,626	1,013,649	1,029,295	1,111,642	1,169,779	1,123,501	1,108,564
5	U. California, San Francisco	842,840	885,182	947,697	935,509	995,226	1,032,673	1,042,841	1,084,031
6	U. California, San Diego	801,823	844,877	883,653	943,219	1,009,378	1,073,864	1,075,554	1,067,388
7	Duke U.	783,784	769,893	807,652	983,289	1,022,207	1,009,911	992,821	1,036,813
8	U. North Carolina, Chapel Hill	484,160	530,515	651,308	755,284	869,174	884,791	973,007	989,766
9	Stanford U.	702,497	698,883	717,022	839,839	907,971	903,238	945,450	959,247
10	U. California, Los Angeles	854,497	904,840	923,916	936,995	982,357	1,003,375	966,659	948,197
11	Harvard U.	493,920	505,832	525,452	583,361	649,774	799,432	1,012,766	933,975
12	Massachusetts Institute of Technology	637,621	682,058	759,649	677,138	723,610	824,130	900,524	908,017
13	Columbia U. in the City of New York	545,996	548,704	604,660	807,235	878,900	889,487	889,188	890,642
14	Cornell U.	645,791	655,641	672,692	749,721	781,651	802,387	845,184	883,292
15	U. Minnesota, Twin Cities	NA	NA	NA	786,074	847,419	826,173	858,378	876,870
16	U. Pittsburgh, Pittsburgh	564,994	599,800	629,088	822,491	899,386	866,638	872,736	856,806
17	Texas A&M U., College Station and Health Science Center	565,631	604,526	651,923	689,624	705,720	693,421	820,015	854,214
18	U. Pennsylvania	668,105	740,410	758,159	836,322	886,036	847,077	828,422	828,350
19	Ohio State U.	737,324	726,302	743,591	755,194	832,126	766,513	793,373	815,075
20	Pennsylvania State U., University Park and Hershey Medical Center	NA	NA	NA	770,449	794,846	797,679	837,880	800,773
21	U. Texas M. D. Anderson Cancer Center	496,539	558,503	578,788	599,529	663,279	685,814	718,096	794,980
22	Yale U.	451,318	490,913	512,997	623,510	656,967	656,555	788,784	772,840
23	U. California, Berkeley	570,252	620,374	682,568	694,049	707,945	730,348	727,002	744,343
24	Georgia Institute of Technology	476,138	524,888	565,487	615,833	655,375	688,905	730,488	725,550
25	U. California, Davis	604,512	647,691	687,690	679,915	707,896	713,292	725,734	711,721
26	U. Florida	635,956	632,680	644,241	681,548	739,931	696,985	695,063	708,526
27	U. Southern California	528,466	540,366	556,807	592,791	603,294	623,544	645,636	687,222
28	Vanderbilt U.	415,750	444,873	455,835	504,959	566,031	560,466	571,603	683,890
29	Washington U., Saint Louis	575,846	566,378	630,141	695,974	725,039	706,410	684,847	664,752
30	Northwestern U.	473,060	518,572	555,510	575,078	618,980	631,078	639,781	645,333
31	Rutgers, State U. New Jersey, New Brunswick	NA	NA	NA	428,432	432,306	434,901	493,320	644,116
32	U. Illinois, Urbana-Champaign	492,347	518,333	581,805	515,133	545,669	583,754	743,487	621,733
33	U. Arizona	533,450	547,197	566,334	586,647	610,565	625,365	629,466	588,088
34	U. Texas, Austin	502,786	553,051	566,166	589,502	632,171	621,538	634,132	585,251
35	Purdue U., West Lafayette	NA	NA	NA	548,980	578,231	602,501	595,739	564,923
36	Emory U.	412,503	463,317	459,067	529,453	547,316	565,766	575,943	558,600
37	Michigan State U.	395,611	392,242	405,961	431,373	454,248	507,061	515,707	526,906
38	New York U.	319,728	337,093	338,839	365,944	430,752	458,645	471,909	523,623
39	Virginia Polytechnic Institute and State U.	370,805	375,773	399,433	398,169	450,058	454,417	496,169	513,149

Appendix B₁. Higher Education R&D Expenditures, ranked by FY 2014 Total R&D Expenditures: FYs 2005–14 (Top 300 Institutions)

(Dollars in thousands)

Rank	Institution	2007	2008	2009	2010	2011	2012	2013	2014
40	Baylor C. of Medicine	438,280	449,301	449,031	447,874	466,061	474,700	508,799	496,314
41	U. South Florida, Tampa	NA	NA	NA	385,029	394,963	443,206	459,409	488,641
42	U. Utah	248,864	254,632	334,002	379,200	414,316	430,056	494,058	486,140
43	U. Maryland, College Park Icahn School of Medicine at Mt.	371,696	405,569	417,365	451,415	495,382	502,406	491,998	485,051
44	Sinai	269,451	296,380	318,407	370,666	405,527	400,680	428,654	463,429
45	U. Iowa	374,905	300,422	334,937	444,034	443,893	446,429	435,377	449,147
46	North Carolina State U. U. Texas Southwestern Medical	333,027	367,422	383,193	360,795	378,154	404,225	417,468	446,112
47	Center	341,090	390,349	402,087	419,220	431,883	435,085	440,620	434,627
48	U. Alabama, Birmingham	352,777	405,731	435,460	489,845	503,698	453,779	440,796	428,563
49	Arizona State U.	238,054	273,532	311,461	329,345	355,215	385,959	405,154	426,651
50	U. Cincinnati	344,526	359,011	369,906	411,269	448,936	433,668	438,642	422,873
51	Case Western Reserve U.	379,347	420,441	418,012	418,164	429,206	431,090	425,788	419,011
52	SUNY, Polytechnic Institute	na	na	na	na	na	na	na	412,851
53	U. Maryland Baltimore U. Colorado Denver and Anschutz	358,851	379,407	359,542	374,036	409,665	433,228	429,315	411,268
54	Medical Campus	264,739	269,805	364,659	389,461	417,587	431,977	409,443	411,020
55	U. Chicago	325,161	360,047	381,194	437,721	453,562	419,631	402,621	390,082
56	SUNY, U. Buffalo	323,417	339,575	349,423	349,670	353,172	360,226	387,863	386,562
57	Scripps Research Institute	360,511	366,047	382,275	387,298	400,768	398,673	399,899	386,231
58	U. Colorado Boulder	267,314	272,191	299,892	349,449	390,677	392,004	385,849	379,475
59	Boston U.	253,899	259,045	284,507	352,817	355,916	334,496	368,281	367,328
60	California Institute of Technology	287,343	274,671	345,400	362,172	377,514	379,713	347,105	367,182
61	U. Virginia, Charlottesville	NA	NA	NA	276,308	398,096	383,359	385,828	358,576
62	U. Georgia	351,935	369,546	369,997	295,339	335,901	351,395	350,225	355,471
63	U. Rochester	377,016	378,368	398,187	414,655	429,034	389,612	389,355	353,419
64	U. Illinois, Chicago	344,815	339,704	347,118	362,939	380,828	388,625	367,848	347,888
65	U. Miami	212,532	244,067	250,339	280,671	323,486	365,301	344,757	345,805
66	Brown U.	175,623	182,596	187,380	335,838	344,090	365,120	361,010	341,531
67	U. California, Irvine	316,178	334,279	336,345	327,594	344,678	350,030	347,773	340,056
68	U. Kentucky	348,835	345,355	360,254	359,944	372,932	360,776	339,764	328,239
69	Washington State U.	213,262	283,086	301,080	304,352	320,510	335,930	341,082	326,414
70	U. Hawaii, Manoa	266,447	271,835	290,707	303,085	318,316	312,311	326,750	324,342
71	Indiana U.-Purdue U., Indianapolis	NA	NA	NA	296,194	322,617	316,914	332,760	324,261
72	Rockefeller U.	233,917	247,505	252,478	265,750	272,491	292,896	298,474	316,368
73	Oregon Health and Science U.	287,430	301,396	309,675	314,990	334,324	305,530	308,767	314,802
74	Iowa State U.	221,002	228,167	228,526	250,120	267,641	260,995	266,596	313,263
75	Colorado State U., Fort Collins	296,020	302,613	311,720	302,896	330,784	375,919	313,238	307,978
76	Yeshiva U.	192,199	197,311	193,010	314,240	281,334	289,027	271,166	306,826
77	U. Kansas	219,535	227,433	236,544	267,961	274,727	286,262	298,498	301,534
78	Princeton U.	198,945	204,489	212,510	242,570	263,335	275,666	269,908	293,274
79	Louisiana State U., Baton Rouge	266,895	280,081	294,780	289,872	287,841	285,395	283,400	290,076
80	U. Nebraska, Lincoln Uniformed Services U. of the Health	229,496	244,869	251,195	191,268	235,296	253,320	266,506	278,299
81	Sciences	71,307	106,179	192,268	134,126	175,365	143,250	164,232	262,489

Appendix B₁. Higher Education R&D Expenditures, ranked by FY 2014 Total R&D Expenditures: FYs 2005–14 (Top 300 Institutions)

(Dollars in thousands)

Rank	Institution	2007	2008	2009	2010	2011	2012	2013	2014
82	U. Connecticut	233,774	233,246	232,944	237,908	253,792	256,854	242,251	258,056
83	U. Oklahoma, Norman and Health Science Center	187,454	204,765	213,720	218,089	249,297	240,974	255,674	253,344
84	Florida State U.	211,310	211,557	237,794	227,329	230,411	225,378	250,877	252,548
85	Carnegie Mellon U.	198,139	210,988	217,687	222,790	242,882	255,933	271,277	251,222
86	Medical U. South Carolina	184,624	189,369	216,778	224,632	213,346	236,586	245,451	242,594
87	U. Massachusetts, Medical School	157,469	178,614	204,033	232,039	262,714	256,090	245,923	241,869
88	U. Missouri, Columbia	244,429	251,894	253,527	238,500	230,957	239,810	236,423	237,266
89	U. Texas Health Science Center, Houston	191,724	197,252	217,623	240,772	261,172	236,250	233,256	233,737
90	Oregon State U.	231,895	233,358	257,564	216,595	228,814	240,507	232,677	230,963
91	U. New Mexico	181,734	202,694	205,831	211,771	220,565	220,360	227,703	228,849
92	George Washington U.	149,413	181,688	103,793	196,917	197,621	196,448	202,428	227,995
93	U. California, Santa Barbara	200,504	214,441	227,221	225,730	230,435	233,883	236,497	226,693
94	Temple U. Woods Hole Oceanographic Institution	90,773	99,815	111,421	124,528	134,533	138,318	224,087	224,101
95	Wayne State U.	137,410	150,720	157,289	181,746	198,775	204,352	198,232	220,016
96	SUNY, Stony Brook U.	238,738	253,604	257,207	254,492	259,895	227,070	224,331	218,435
97	Mississippi State U.	268,541	190,712	189,299	204,728	211,356	219,744	225,712	211,631
98	U. South Carolina, Columbia	NA	NA	NA	229,145	201,592	214,901	203,365	206,173
99	Indiana U., Bloomington	NA	NA	NA	177,520	184,096	184,486	197,897	206,039
100	Virginia Commonwealth U.	151,197	171,637	162,283	197,709	207,756	201,366	196,015	201,858
102	U. Massachusetts, Amherst	146,323	156,817	160,666	169,141	181,297	194,775	190,739	200,199
103	Medical C. Wisconsin	158,171	165,529	176,237	191,816	215,358	209,040	201,237	199,713
104	Dartmouth C.	192,846	188,122	190,425	194,141	210,631	195,930	201,591	187,681
105	U. Central Florida	141,140	147,092	148,809	117,985	109,190	116,891	126,681	185,555
106	Kansas State U.	126,864	141,535	151,376	160,679	169,167	176,141	183,096	184,945
107	U. Louisville	163,434	164,123	167,178	189,090	197,438	196,842	186,772	183,376
108	U. Notre Dame	82,272	103,311	104,866	110,369	134,410	157,691	175,220	182,228
109	U. Tennessee, Knoxville	NA	NA	NA	150,671	167,456	179,252	193,054	179,041
110	U. Texas Medical Branch	183,492	180,026	184,845	188,399	193,555	180,888	180,198	178,014
111	Wake Forest U.	186,175	200,750	201,701	192,034	209,134	204,328	182,721	176,380
112	U. Delaware	120,431	126,971	126,788	153,311	169,746	170,174	179,967	175,563
113	Georgetown U. U. Texas Health Science Center, San Antonio	140,710	144,957	151,064	159,355	169,916	180,308	178,995	172,726
114	Utah State U.	160,282	201,323	221,535	207,115	198,655	184,298	175,983	172,716
115	West Virginia U.	142,784	148,257	145,240	149,169	174,167	157,355	158,352	164,892
116	Clemson U.	138,800	145,107	145,656	154,926	166,420	169,303	167,144	164,454
117	Tufts U.	216,959	200,789	193,924	174,693	166,350	142,096	152,444	161,070
118	Texas Tech U.	135,868	145,169	154,575	156,106	156,395	160,922	156,525	160,825
119	Tulane U.	59,439	60,165	92,058	133,360	149,399	138,026	142,676	159,308
120	U. Alaska, Fairbanks	140,321	165,678	163,572	165,513	171,703	164,373	160,414	157,825
121	North Dakota State U.	155,147	149,313	157,600	161,986	165,530	160,407	162,658	155,769
122	U. California, Santa Cruz	107,337	116,327	114,260	126,419	134,064	135,493	150,173	154,437
123		147,396	162,100	170,461	143,919	155,617	155,516	150,777	151,734

Appendix B₁. Higher Education R&D Expenditures, ranked by FY 2014 Total R&D Expenditures: FYs 2005–14 (Top 300 Institutions)

(Dollars in thousands)

Rank	Institution	2007	2008	2009	2010	2011	2012	2013	2014
124	U. New Hampshire	120,463	121,092	117,546	115,562	143,002	165,156	147,446	147,544
125	Auburn U., Auburn	NA	NA	NA	145,115	163,335	133,013	147,229	142,487
126	U. Houston	78,381	87,691	102,917	119,811	113,709	116,288	130,844	140,597
127	U. Nebraska, Medical Center	111,751	112,887	123,629	138,219	133,036	141,619	137,485	139,126
128	Rice U.	72,112	74,720	79,431	97,903	110,235	117,223	131,003	138,536
129	New Mexico State U.	152,104	141,523	154,363	157,872	139,062	141,151	142,365	134,262
130	U. California, Riverside	139,960	139,319	139,536	130,288	132,238	135,494	132,617	133,558
131	Florida International U.	108,015	107,025	101,322	110,271	110,006	118,058	128,070	132,531
132	U. Arkansas for Medical Sciences	108,551	117,440	106,314	119,518	122,066	129,056	133,677	131,438
133	Drexel U.	98,010	103,558	105,020	118,349	115,020	116,768	123,813	131,170
134	SUNY, U. Albany	309,438	271,187	341,624	359,364	148,625	137,758	137,759	130,955
135	Oklahoma State U., Stillwater	NA	NA	NA	147,094	162,786	166,523	134,500	126,543
136	U. Arkansas, Fayetteville	113,773	115,397	117,448	113,909	120,007	123,199	125,501	125,824
137	Georgia State U.	65,900	94,429	78,920	81,015	92,725	91,148	111,999	123,915
138	Thomas Jefferson U.	107,288	99,275	101,188	103,064	104,923	100,506	89,273	118,378
139	Northeastern U.	78,220	66,315	67,174	79,949	86,783	107,862	116,088	116,245
140	Montana State U., Bozeman	124,833	130,120	126,844	135,084	125,966	124,228	113,136	113,348
141	U. Mississippi and U. Mississippi, Jackson, Medical Center	117,522	99,413	100,102	110,020	122,765	121,731	108,168	109,922
142	U. Vermont	114,172	116,463	122,991	129,856	132,356	115,697	115,485	109,701
143	New Jersey Institute of Technology	88,699	89,792	92,891	92,318	100,491	102,851	107,310	106,081
144	Rensselaer Polytechnic Institute	77,679	77,967	78,188	83,952	84,834	92,720	92,495	105,608
145	U. Maine	100,072	96,755	101,344	111,282	111,600	92,135	77,583	101,247
146	U. Texas, Dallas	46,477	59,300	65,804	82,044	93,230	90,700	98,842	99,727
147	Naval Postgraduate School	66,972	89,940	82,451	103,510	101,363	132,450	94,880	99,032
148	George Mason U.	61,068	76,838	85,306	84,120	88,089	90,198	95,913	98,680
149	San Diego State U.	74,686	81,385	91,074	99,137	106,591	92,867	86,733	95,674
150	U. Idaho	83,690	82,489	89,242	87,207	96,229	97,227	95,891	95,594
151	U. Rhode Island	76,237	78,871	84,989	90,016	102,630	114,323	101,898	91,706
152	U. Oregon	71,362	78,934	86,371	94,107	103,019	105,030	94,522	91,203
153	U. Alabama, Huntsville	73,760	75,818	74,340	75,683	75,724	87,388	101,016	89,325
154	U. Texas, Arlington	33,324	48,475	55,005	71,414	72,483	78,556	86,735	89,175
155	U. Nevada, Reno	99,286	104,841	109,151	95,423	89,740	85,726	89,797	87,324
156	U. Dayton	76,166	83,293	95,043	93,309	90,557	81,030	84,252	86,881
157	Rush U.	84,370	89,513	96,975	73,398	79,212	80,300	81,770	80,551
158	U. Texas, El Paso	47,410	50,603	59,983	68,870	74,069	79,649	83,249	79,537
159	Cold Spring Harbor Laboratory	ne	ne	ne	ne	89,913	84,072	78,236	76,733
160	Brandeis U.	58,925	51,686	65,586	71,006	74,889	74,660	76,060	74,992
161	SUNY, Binghamton U.	37,382	62,959	71,912	72,057	72,539	81,000	76,005	71,382
162	U. Akron	27,399	27,415	34,853	52,884	60,352	66,413	69,640	69,528
163	Michigan Technological U.	56,640	60,356	60,395	63,471	70,089	71,989	70,689	68,526
164	U. Tennessee, Health Science Center	NA	NA	NA	81,904	81,220	77,754	71,902	67,841
165	U. Maryland, Baltimore County	71,201	72,057	81,056	87,156	91,657	74,993	71,819	67,833
166	U. North Dakota	63,298	65,185	71,858	76,560	74,882	80,149	68,942	67,595

Appendix B₁. Higher Education R&D Expenditures, ranked by FY 2014 Total R&D Expenditures: FYs 2005–14 (Top 300 Institutions)

(Dollars in thousands)

Rank	Institution	2007	2008	2009	2010	2011	2012	2013	2014
167	U. Louisiana, Lafayette	60,203	65,462	75,474	69,412	69,978	65,275	61,887	67,580
168	U. Tennessee, Knoxville, Institute of Agriculture	NA	NA	NA	59,212	62,786	68,480	67,887	67,171
169	Old Dominion U.	73,549	87,594	96,186	97,176	102,192	104,579	99,138	67,037
170	Syracuse U.	58,342	62,098	79,950	107,024	83,686	85,649	70,967	66,321
171	Southern Illinois U., Carbondale	65,074	67,435	66,658	69,924	71,130	71,097	70,854	65,256
172	U. Massachusetts, Lowell	36,117	40,873	56,664	59,345	60,013	60,624	63,136	64,591
173	Georgia Regents U.□	na	na	na	na	na	na	64,033	64,118
174	American U.	13,107	15,742	35,194	39,747	46,611	43,526	61,087	63,628
175	U. Toledo	54,342	61,082	67,464	70,399	74,149	68,228	69,072	61,900
176	Cleveland State U.	17,819	15,027	14,345	34,235	55,502	61,111	67,378	61,783
177	U. Massachusetts, Boston	37,441	38,018	47,028	56,416	57,040	60,086	60,380	61,186
178	Ohio U.	39,008	38,984	43,097	50,440	57,643	57,203	59,734	60,800
179	U. Wisconsin-Milwaukee	52,523	52,443	56,196	71,181	65,648	61,771	56,587	60,752
180	Colorado School of Mines	29,939	34,050	40,117	44,879	48,704	58,836	59,091	59,695
181	C. of William and Mary and Virginia Institute of Marine Science	59,894	63,400	59,638	57,461	58,919	55,805	57,940	59,015
182	Wichita State U.	53,392	60,640	75,655	51,524	63,538	61,279	61,388	58,859
183	South Dakota State U.	39,564	48,063	55,584	67,552	69,680	68,743	63,843	58,334
184	U. Memphis	57,264	56,075	54,970	49,517	48,321	51,194	48,141	55,566
185	U. Montana, Missoula	56,119	58,557	59,791	63,540	60,159	59,313	60,189	55,032
186	Wright State U.	49,798	47,803	48,215	48,575	48,501	46,213	50,489	54,985
187	Portland State U.	30,203	35,705	44,574	56,533	58,975	58,489	55,435	54,787
188	U. Alabama, Tuscaloosa	36,807	33,477	36,889	40,762	53,633	55,885	55,443	53,140
189	CUNY, City C.	33,712	35,096	37,538	46,699	60,648	57,982	55,138	52,654
190	U. Southern Mississippi	48,595	47,582	47,205	42,059	46,591	60,079	51,962	51,938
191	U. Wyoming	80,041	76,711	79,684	55,319	57,549	65,611	65,490	51,422
192	U. Maryland, Center for Environmental Science	40,720	40,556	41,670	42,670	50,007	48,224	53,683	50,814
193	Loyola U., Chicago	35,420	35,307	36,519	43,903	42,708	45,903	51,676	50,774
194	U. California, Office of the President	119,109	100,189	83,108	72,542	63,420	65,627	67,447	50,103
195	Boston C.	41,710	44,413	45,795	50,537	52,253	51,442	50,702	49,724
196	New Mexico Institute of Mining and Technology	83,742	79,437	81,742	51,696	43,857	37,875	32,499	48,338
197	U. Texas, San Antonio	32,321	34,601	46,521	56,279	58,667	57,233	53,626	47,061
198	U. North Texas, Health Science Center	28,187	28,179	29,582	38,862	45,943	46,865	44,904	47,002
199	Florida A&M U.	17,695	25,515	27,018	53,474	53,326	52,263	51,149	46,367
200	Louisiana State U., Health Sciences Center – New Orleans	91,498	60,007	59,111	59,776	57,007	53,712	49,443	45,486
201	U.S. Air Force Academy	16,345	45,445	50,452	62,097	73,607	56,044	57,164	44,663
202	Saint Louis U.	56,921	59,236	38,075	46,839	53,179	49,086	48,231	44,481
203	U. North Texas, Denton	15,981	18,066	24,120	31,496	42,475	46,943	49,518	44,180
204	Eastern Virginia Medical School	31,453	30,777	36,678	44,420	36,569	37,745	44,183	43,917
205	San Jose State U.	47,256	52,408	55,213	38,241	40,149	34,727	38,326	43,509
206	Morehouse School of Medicine	27,886	27,077	27,392	30,669	33,946	37,586	36,638	41,858
207	U. South Alabama	26,181	29,895	32,882	35,500	42,233	40,172	40,590	41,681

Appendix B₁. Higher Education R&D Expenditures, ranked by FY 2014 Total R&D Expenditures: FYs 2005–14 (Top 300 Institutions)

(Dollars in thousands)

Rank	Institution	2007	2008	2009	2010	2011	2012	2013	2014
208	Howard U.	38,583	38,010	34,714	40,080	42,341	45,486	42,789	40,771
209	U. Puerto Rico, Medical Sciences Campus	38,863	35,570	41,668	39,134	64,017	45,649	43,374	40,444
210	U. Nevada, Las Vegas	57,768	53,320	41,652	44,457	39,526	34,543	35,935	39,448
211	Texas State U.	10,320	19,309	24,497	30,560	33,487	36,664	37,053	39,265
212	Missouri U. of Science and Technology	31,168	36,533	35,672	42,263	41,581	38,588	40,397	39,065
213	CUNY, Hunter C.	31,023	34,644	37,349	38,900	39,772	41,022	40,059	38,879
214	Brigham Young U., Provo	29,635	28,988	29,901	32,997	37,142	33,843	36,562	38,051
215	Texas Tech U., Health Sciences Center	21,006	24,716	37,363	51,282	58,774	61,219	61,412	38,015
216	Lehigh U.	38,307	38,190	34,352	37,332	32,086	31,992	35,220	37,066
217	Rochester Institute of Technology	24,106	27,025	33,393	38,663	34,889	36,935	36,613	35,945
218	North Carolina Agricultural and Technical State U.	24,138	29,036	28,615	35,297	34,930	35,103	33,994	35,047
219	SUNY, Upstate Medical U. SUNY, Health Science Center	39,699	36,359	33,194	43,824	39,988	35,897	34,286	33,460
220	Brooklyn	29,809	32,299	29,184	32,512	41,993	43,257	39,354	33,331
221	Alabama A&M U.	13,672	8,959	14,752	30,497	32,063	32,312	32,937	32,907
222	Southern Methodist U.	16,985	22,902	16,741	18,742	24,453	24,397	22,544	32,401
223	Northern Arizona U.	27,030	26,160	26,723	28,803	30,785	28,100	30,516	31,590
224	Illinois Institute of Technology	26,740	25,289	25,709	36,554	44,463	32,576	36,722	31,356
225	Stevens Institute of Technology	34,383	30,493	28,660	35,544	41,622	31,929	28,908	30,826
226	U. South Dakota	21,473	22,742	34,690	30,616	28,959	31,982	33,187	30,700
227	Mercer U.	18,163	19,739	21,974	27,298	29,039	31,376	28,892	30,209
228	Worcester Polytechnic Institute	14,308	15,887	15,645	18,613	22,137	20,232	25,298	29,929
229	East Carolina U.	16,372	16,880	24,922	23,995	28,114	31,990	38,271	29,925
230	San Francisco State U.	27,244	21,382	25,323	25,615	26,198	30,291	33,885	29,457
231	U. Missouri, Kansas City	30,944	28,892	28,657	30,163	32,769	29,227	28,829	29,164
232	U. Puerto Rico, Rio Piedras	22,345	35,665	31,592	30,515	32,582	33,099	29,234	28,793
233	U. Massachusetts, Dartmouth	20,120	20,925	20,669	25,725	25,644	22,732	27,326	28,219
234	Rutgers, State U. New Jersey, Newark	NA	NA	NA	27,745	35,774	34,797	37,134	28,083
235	U. Tulsa	16,218	15,576	13,769	23,387	19,489	20,270	21,757	27,077
236	Jackson State U.	36,888	42,739	44,884	44,862	49,998	46,943	36,264	26,609
237	Boise State U.	11,520	11,592	12,305	18,731	24,204	27,920	25,690	26,568
238	Kent State U.	22,201	26,168	27,275	26,331	27,455	26,507	23,149	25,666
239	Creighton U.	28,374	26,872	27,104	27,700	31,443	32,594	29,983	25,560
240	Louisiana State U., Medical Center, Shreveport	NA	33,458	31,293	30,817	31,021	29,365	28,266	25,004
241	Tuskegee U.	15,905	16,606	18,543	15,581	15,685	15,991	21,150	24,945
242	U. California, Merced	11,600	17,403	22,013	21,591	21,328	22,656	22,909	23,916
243	Air Force Institute of Technology	17,173	20,527	27,458	31,259	31,879	32,746	27,592	23,902
244	Desert Research Institute	40,238	38,045	36,490	34,367	35,331	33,056	27,695	23,778
245	Marquette U.	9,917	10,602	10,470	14,310	19,876	18,606	20,856	23,633
246	CUNY, Queens C.	9,840	11,989	13,115	16,845	23,219	22,399	19,762	23,434
247	Loma Linda U.	28,020	35,890	37,557	35,990	39,409	31,772	31,715	23,375
248	U. North Carolina, Charlotte	26,974	25,196	29,272	31,814	27,533	25,141	24,764	23,342

Appendix B₁. Higher Education R&D Expenditures, ranked by FY 2014 Total R&D Expenditures: FYs 2005–14 (Top 300 Institutions)

(Dollars in thousands)

Rank	Institution	2007	2008	2009	2010	2011	2012	2013	2014
249	Texas Tech U., Health Sciences Center, El Paso	ne	ne	ne	ne	ne	ne	ne	23,282
250	Florida Atlantic U.	46,055	49,410	56,127	56,472	62,024	65,377	23,967	22,997
251	Louisiana Tech U.	17,190	22,768	21,458	26,020	27,583	26,546	24,949	22,942
252	Catholic U. of America	20,484	20,767	20,400	21,454	25,397	24,971	23,235	22,331
253	U. Minnesota, Duluth	NA	NA	NA	21,150	23,400	21,530	21,383	21,904
254	Texas A&M U.-Kingsville	14,381	14,495	16,217	17,378	17,114	17,419	18,653	21,819
255	Texas A&M U.-Corpus Christi	13,178	12,289	13,858	17,266	17,509	15,776	17,418	21,321
256	Miami U.	23,729	25,052	29,808	26,521	26,093	26,311	23,924	21,216
257	Baylor U.	10,794	12,655	14,035	10,925	12,343	10,161	13,616	20,729
258	U. North Carolina, Greensboro	13,574	16,451	19,811	22,436	26,121	19,080	16,590	20,723
259	Charles R. Drew U. of Medicine and Science	52,118	49,224	57,604	22,152	22,150	20,580	18,547	20,686
260	U. New Orleans	28,972	27,917	30,801	35,021	35,359	28,450	24,607	20,614
261	Idaho State U.	20,569	21,627	21,405	20,495	21,450	21,179	22,147	20,610
262	Columbia U., Teachers C.	14,561	17,104	18,399	17,167	18,406	20,805	19,649	20,538
263	Marshall U.	22,755	23,022	23,645	24,501	26,723	18,998	19,617	20,382
264	U. of the Virgin Islands	17,842	18,099	22,019	32,350	21,994	25,719	20,041	20,371
265	Georgia Southern U.	6,600	4,204	4,739	3,704	3,912	5,719	18,069	20,245
266	Tennessee State U.	12,982	12,571	12,581	12,432	13,468	15,439	16,177	20,068
267	U. West Florida	14,903	14,137	13,288	17,757	21,710	16,221	19,332	19,579
268	Illinois State U.	7,528	7,110	8,727	18,417	17,833	17,760	17,589	19,159
269	SUNY, C. of Environmental Science and Forestry	23,854	26,359	20,513	26,916	25,024	23,132	21,239	19,027
270	Meharry Medical C.	33,218	34,152	26,587	27,001	29,055	25,559	22,532	18,997
271	Western Michigan U. and Homer Stryker M.D. School of Medicine	25,779	26,649	22,579	26,391	25,051	21,073	18,979	18,942
272	Southern Illinois U., Edwardsville	44,650	47,268	49,139	31,781	33,736	26,992	25,807	18,915
273	U. Puerto Rico, Mayaguez	21,738	20,094	20,991	26,475	34,424	32,115	29,225	18,734
274	U. Missouri, Saint Louis	13,214	14,374	15,665	14,628	18,461	19,356	20,869	18,618
275	U. Denver	14,178	14,657	16,727	15,748	17,004	15,237	19,262	18,183
276	Fordham U.	13,268	16,492	15,676	19,289	18,350	19,311	18,822	17,961
277	New York Medical C.	34,365	31,644	30,584	28,400	27,316	23,277	20,243	17,908
278	Rosalind Franklin U. of Medicine and Science	12,199	12,128	13,375	12,426	14,261	15,587	17,401	17,794
279	Delaware State U.	7,729	8,384	9,924	15,200	19,019	15,668	17,295	17,679
280	U. Alaska, Anchorage	14,751	13,353	13,400	16,709	18,620	20,194	20,255	17,150
281	Northern Illinois U.	21,483	21,179	27,938	27,036	21,748	21,823	23,027	16,427
282	Albany Medical C.	15,029	15,108	17,776	22,953	20,876	17,735	15,093	16,093
283	Northeast Ohio Medical U.	4,984	9,165	10,077	10,819	13,581	13,358	12,722	15,916
284	Morgan State U.	11,257	12,336	12,433	12,804	12,803	17,751	15,475	15,720
285	Embry-Riddle Aeronautical U.	7,930	7,004	10,899	12,189	16,289	19,376	16,484	15,393
286	Oakland U.	9,038	9,812	11,275	12,856	15,868	18,194	16,767	15,196
287	California Polytechnic State U., San Luis Obispo	14,970	15,196	19,857	19,732	16,532	17,412	16,067	15,096
288	Duquesne U.	11,175	11,982	11,856	15,804	16,814	15,547	15,661	15,025
289	Central Michigan U.	5,082	4,928	5,758	7,483	8,671	10,907	12,879	15,015

Appendix B₁. Higher Education R&D Expenditures, ranked by FY 2014 Total R&D Expenditures: FYs 2005–14 (Top 300 Institutions)

(Dollars in thousands)

Rank	Institution	2007	2008	2009	2010	2011	2012	2013	2014
290	U.S. Military Academy	8,526	10,549	9,563	22,171	13,799	12,227	11,630	14,819
291	Fayetteville State U.	8,124	8,647	10,541	11,865	14,618	15,719	16,698	14,732
292	U. North Carolina, Wilmington	17,603	20,326	18,287	23,143	22,593	19,722	18,145	14,648
293	Florida Institute of Technology	7,732	9,232	11,523	12,054	14,523	17,100	13,298	14,255
294	Winthrop U.	ne	ne	ne	ne	5,089	7,993	12,495	13,981
295	Clarkson U.	17,257	17,724	15,047	18,584	17,951	14,809	12,061	13,750
296	Nova Southeastern U.	6,697	7,603	9,018	10,116	12,322	12,908	12,712	13,716
297	Villanova U.	10,962	9,484	9,919	10,066	10,044	8,547	7,049	13,700
298	California State U., San Bernardino	10,734	12,487	9,871	4,188	11,591	9,303	11,942	13,582
299	South Carolina State U.	3,796	8,123	8,535	7,167	10,037	12,909	13,159	13,147
300	California State U., Sacramento	183	4,718	14,461	15,207	16,344	14,053	15,564	13,136

i = imputed. na = not applicable; institution did not exist or did not exist as a separate entity. NA = not available; institution was not surveyed separately. ne = not eligible; institution did not meet the criteria for inclusion.

^a Johns Hopkins University includes Applied Physics Laboratory, with \$1,254,294 thousand in total R&D expenditures in FY 2014.

^b The majority of expenditures included under All other surveyed institutions for FY 2009 and earlier years is accounted for by multi-campus institutions that reported a single amount prior to FY 2010.

NOTES: Prior to FY 2010, some institution totals for all R&D expenditures may be lower-bound estimates because the National Science Foundation did not attempt to estimate for nonresponse on non-science and engineering R&D expenditures item prior to FY 2010. Tied institutions are ranked alphabetically. Institutions ranked are geographically separate campuses headed by a campus-level president or chancellor. Some campuses are part of large multi-campus universities; some are part of state university systems. For a complete listing of campuses that belong to a larger university or system and their aggregate R&D expenditures, see table 84.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, Higher Education Research and Development Survey.

Appendix B₂. Higher Education R&D Expenditures at Public Institutions, ranked by FY 2014 Total R&D Expenditures: FYs 2005–14 (Top 300 Institutions)

(Dollars in thousands)

Rank	Institution	All R&D expenditures	Source of Funds					
			Federal government	State and local government	Institution funds	Business	Nonprofit organizations	All other sources
	All institutions	44,657,466	23,493,609	3,479,814	11,649,654	2,375,898	2,234,017	1,424,474
1	U. Michigan, Ann Arbor	1,349,262	742,160	1,710	483,525	49,042	61,226	11,599
2	U. Washington, Seattle	1,176,340	909,034	17,431	74,629	49,963	103,278	22,005
3	U. Wisconsin-Madison	1,108,564	548,388	78,427	391,436	23,056	43,792	23,465
4	U. California, San Francisco	1,084,031	544,697	39,414	221,814	61,300	117,238	99,568
5	U. California, San Diego	1,067,388	599,095	44,660	161,325	75,948	85,676	100,684
6	U. North Carolina, Chapel Hill	989,766	610,664	25,143	240,000	33,854	65,382	14,723
7	U. California, Los Angeles	948,197	465,170	39,923	184,970	45,193	143,823	69,118
8	U. Minnesota, Twin Cities	876,870	489,767	51,934	255,968	28,164	12,845	38,192
9	U. Pittsburgh, Pittsburgh	856,806	582,136	7,523	133,831	15,008	42,208	76,100
10	Texas A&M U., College Station and Health Science Center	854,214	311,920	167,219	232,928	70,607	61,956	9,584
11	Ohio State U.	815,075	454,484	59,484	113,050	118,297	31,237	38,523
12	Pennsylvania State U., University Park and Hershey Medical Center	800,773	520,574	50,484	153,839	33,808	39,118	2,950
13	U. Texas M. D. Anderson Cancer Center	794,980	158,986	241,307	172,363	75,307	33,991	113,026
14	U. California, Berkeley	744,343	313,390	52,173	163,844	83,537	81,014	50,385
15	Georgia Institute of Technology	725,550	512,015	12,682	143,807	41,574	5,025	10,447
16	U. California, Davis	711,721	330,367	62,662	185,257	39,598	41,910	51,927
17	U. Florida	708,526	289,327	109,414	217,763	35,107	35,667	21,248
18	Rutgers, State U. New Jersey, New Brunswick	644,116	360,157	61,720	133,527	24,284	50,897	13,531
19	U. Illinois, Urbana-Champaign	621,733	343,275	31,986	170,247	40,971	18,427	16,827
20	U. Arizona	588,088	290,370	17,266	162,841	16,372	33,198	68,041
21	U. Texas, Austin	585,251	332,758	19,163	117,698	71,349	34,384	9,899
22	Purdue U., West Lafayette	564,923	236,860	84,591	165,484	38,945	32,175	6,868
23	Michigan State U.	526,906	261,826	37,710	189,184	8,077	14,988	15,121
24	Virginia Polytechnic Institute and State U.	513,149	204,308	52,197	222,065	28,651	2,473	3,455
25	U. South Florida, Tampa	488,641	222,790	24,494	168,980	22,893	19,914	29,570
26	U. Utah	486,140	288,514	5,206	129,960	37,697	24,340	423
27	U. Maryland, College Park	485,051	333,409	15,860	117,454	6,967	4,120	7,241
28	U. Iowa	449,147	235,527	8,067	166,616	17,183	21,394	360
29	North Carolina State U.	446,112	181,449	100,625	111,905	49,876	2,088	169
30	U. Texas Southwestern Medical Center	434,627	185,137	75,407	59,297	25,047	52,945	36,794
31	U. Alabama, Birmingham	428,563	280,333	1,198	102,632	25,325	19,075	0
32	Arizona State U.	426,651	196,270	25,796	168,906	15,518	13,401	6,760
33	U. Cincinnati	422,873	245,086	13,676	116,610	21,853	25,509	139
34	SUNY, Polytechnic Institute	412,851	21,208	170,425	48,300	170,109	2,636	173
35	U. Maryland Baltimore	411,268	224,802	32,385	116,033	8,362	28,393	1,293
36	U. Colorado Denver and Anschutz Medical Campus	411,020	285,017	16,936	28,334	36,800	40,034	3,899
37	SUNY, U. Buffalo	386,562	189,209	20,077	123,919	21,226	19,516	12,615
38	U. Colorado Boulder	379,475	314,890	2,338	31,985	13,159	17,103	0
39	U. Virginia, Charlottesville	358,576	205,865	3,691	108,412	16,040	22,364	2,204
40	U. Georgia	355,471	126,164	33,272	152,051	14,048	22,783	7,153
41	U. Illinois, Chicago	347,888	203,733	9,190	106,512	6,048	20,602	1,803
42	U. California, Irvine	340,056	182,585	20,639	63,022	15,263	28,873	29,674
43	U. Kentucky	328,239	142,312	48,793	97,080	13,714	11,037	15,303
44	Washington State U.	326,414	126,955	49,059	123,367	15,713	7,685	3,635
45	U. Hawaii, Manoa	324,342	206,810	8,113	88,687	3,348	6,731	10,653

**Appendix B₂. Higher Education R&D Expenditures at Public Institutions, ranked by FY 2014
Total R&D Expenditures: FYs 2005–14 (Top 300 Institutions)**

(Dollars in thousands)

Rank	Institution	All R&D expenditures	Source of Funds					
			Federal government	State and local government	Institution funds	Business	Nonprofit organizations	All other sources
46	Indiana U.-Purdue U., Indianapolis	324,261	143,386	2,933	121,875	15,914	38,800	1,353
47	Oregon Health and Science U.	314,802	247,740	0	23,312	14,022	26,201	3,527
48	Iowa State U.	313,263	116,273	39,092	123,615	21,178	9,787	3,318
49	Colorado State U., Fort Collins	307,978	212,054	14,189	42,698	14,555	15,588	8,894
50	U. Kansas	301,534	165,442	8,273	99,410	12,704	15,521	184
51	Louisiana State U., Baton Rouge	290,076	94,701	72,062	102,390	14,174	5,385	1,364
52	U. Nebraska, Lincoln	278,299	94,265	4,415	159,038	11,920	1,581	7,080
53	Uniformed Services U. of the Health Sciences	262,489	213,389	0	45,234	0	0	3,866
54	U. Connecticut	258,056	144,104	10,790	78,376	9,680	9,450	5,656
55	U. Oklahoma, Norman and Health Science Center	253,344	118,925	40,647	59,483	12,910	10,705	10,674
56	Florida State U.	252,548	151,701	4,909	81,963	1,790	11,342	843
57	Medical U. South Carolina	242,594	118,649	4,286	88,385	16,103	7,660	7,511
58	U. Massachusetts, Medical School	241,869	183,582	564	31,750	6,925	16,349	2,699
59	U. Missouri, Columbia	237,266	104,910	2,019	107,565	6,707	10,555	5,510
60	U. Texas Health Science Center, Houston	233,737	136,145	34,803	20,185	9,977	20,015	12,612
61	Oregon State U.	230,963	145,247	38,149	24,429	8,709	2,405	12,024
62	U. New Mexico	228,849	153,889	2,383	56,676	5,582	8,815	1,504
63	U. California, Santa Barbara	226,693	121,045	4,712	45,243	23,865	13,688	18,140
64	Temple U.	224,101	126,803	4,901	63,073	9,691	13,695	5,938
65	Wayne State U.	218,435	113,618	2,998	78,984	3,594	13,989	5,252
66	SUNY, Stony Brook U.	211,631	111,683	6,025	80,140	4,474	6,828	2,481
67	Mississippi State U.	209,729	71,715	75,679	50,644	10,970	528	193
68	U. South Carolina, Columbia	206,173	91,890	971	98,262	9,449	5,601	0
69	Indiana U., Bloomington	206,039	84,592	1,691	106,257	3,728	8,346	1,425
70	Virginia Commonwealth U.	201,858	138,559	6,692	41,883	7,347	7,377	0
71	U. Massachusetts, Amherst	200,199	110,189	12,122	64,187	6,533	5,812	1,356
72	U. Central Florida	185,555	70,716	8,622	90,752	7,972	3,285	4,208
73	Kansas State U.	184,945	67,438	38,325	64,378	5,058	6,159	3,587
74	U. Louisville	183,376	65,849	14,433	69,111	8,175	6,919	18,889
75	U. Tennessee, Knoxville	179,041	112,201	14,331	42,589	6,069	2,161	1,690
76	U. Texas Medical Branch	178,014	101,761	2,516	56,365	2,166	15,206	0
77	U. Delaware	175,563	116,340	9,713	37,781	5,551	1,927	4,251
78	U. Texas Health Science Center, San Antonio	172,716	89,303	9,619	44,692	9,524	19,578	0
79	Utah State U.	164,892	114,959	30,294	9,660	4,997	561	4,421
80	West Virginia U.	164,454	69,165	11,049	60,625	12,102	3,248	8,265
81	Clemson U.	161,070	49,887	16,933	72,058	18,135	3,432	625
82	Texas Tech U.	159,308	33,137	22,423	86,207	9,052	8,219	270
83	U. Alaska, Fairbanks	155,769	85,904	10,875	48,925	5,503	2,341	2,221
84	North Dakota State U.	154,437	36,277	50,395	58,722	1,242	1,378	6,423
85	U. California, Santa Cruz	151,734	90,858	2,877	28,410	9,938	8,378	11,273
86	U. New Hampshire	147,544	101,125	1,800	30,314	8,051	2,704	3,550
87	Auburn U., Auburn	142,487	50,088	29,663	48,789	6,381	1,419	6,147
88	U. Houston	140,597	58,954	29,414	29,132	11,700	7,439	3,958
89	U. Nebraska, Medical Center	139,126	76,195	3,151	34,642	7,324	17,814	0
90	New Mexico State U.	134,262	80,599	18,682	21,868	2,225	3,397	7,491
91	U. California, Riverside	133,558	57,397	9,013	40,709	6,839	7,560	12,040

**Appendix B₂. Higher Education R&D Expenditures at Public Institutions, ranked by FY 2014
Total R&D Expenditures: FYs 2005–14 (Top 300 Institutions)**

(Dollars in thousands)

Rank	Institution	All R&D expenditures	Source of Funds					
			Federal government	State and local government	Institution funds	Business	Nonprofit organizations	All other sources
92	Florida International U.	132,531	78,961	9,377	38,138	3,337	2,375	343
93	U. Arkansas for Medical Sciences	131,438	55,556	3,708	52,323	833	0	19,018
94	SUNY, U. Albany	130,955	105,333	1,588	15,396	434	1,214	6,990
95	Oklahoma State U., Stillwater	126,543	36,687	30,919	52,816	4,992	692	437
96	U. Arkansas, Fayetteville	125,824	26,111	54,867	28,735	11,658	1,724	2,729
97	Georgia State U.	123,915	42,259	8,050	65,946	394	6,554	712
98	Montana State U., Bozeman U. Mississippi and U. Mississippi, Jackson, Medical Center	113,348	72,777	3,424	29,728	NA	NA	7,419
99	U. Vermont	109,922	64,218	4,762	26,059	8,411	3,700	2,772
100	New Jersey Institute of Technology	109,701	79,743	177	20,930	4,358	3,827	666
101	U. Maine	106,081	54,655	2,823	42,734	2,010	3,473	386
102	U. Texas, Dallas	101,247	50,589	17,031	28,727	3,470	877	553
103	Naval Postgraduate School	99,727	32,699	17,158	29,539	8,976	11,355	0
104	George Mason U.	99,032	96,573	9	1,054	417	60	919
105	San Diego State U.	98,680	61,877	1,945	28,676	2,447	3,248	487
106	U. Idaho	95,674	50,542	6,992	33,788	396	2,700	1,256
107	U. Rhode Island	95,594	50,638	23,365	15,606	2,121	2,007	1,857
108	U. Oregon	91,706	65,715	7,400	13,394	2,947	1,180	1,070
109	U. Alabama, Huntsville	91,203	74,603	880	9,947	1,045	4,728	0
110	U. Texas, Arlington	89,325	75,343	2,012	10,130	1,441	113	286
111	U. Nevada, Reno	89,175	24,857	16,167	36,330	1,986	3,369	6,466
112	U. Texas, El Paso	87,324	53,363	10,376	17,988	1,544	1,335	2,718
113	SUNY, Binghamton U.	79,537	35,304	16,640	16,985	2,014	1,067	7,527
114	U. Akron	71,382	14,843	2,572	49,849	3,076	353	689
115	Michigan Technological U.	69,528	20,263	4,235	31,131	3,576	4,495	5,828
116	U. Tennessee, Health Science Center	68,526	30,588	311	30,217	5,042	872	1,496
117	U. Maryland, Baltimore County	67,841	41,830	2,886	11,304	3,547	3,931	4,343
118	U. North Dakota	67,833	47,538	2,266	13,942	1,524	1,627	936
119	U. Louisiana, Lafayette	67,595	40,340	7,301	6,433	12,021	1,005	495
120	U. Tennessee, Knoxville, Institute of Agriculture	67,580	10,666	6,713	35,965	12,771	1,396	69
121	Old Dominion U.	67,171	15,342	2,083	42,990	3,927	1,468	1,361
122	Southern Illinois U., Carbondale	67,037	41,270	4,403	18,631	1,772	577	384
123	U. Massachusetts, Lowell	64,591	28,654	2,165	27,209	3,921	1,569	1,073
124	Georgia Regents U. □	64,118	47,771	23	8,274	2,915	4,331	804
125	U. Toledo	61,900	34,684	6,602	15,203	3,913	1,435	63
126	Cleveland State U.	61,783	44,233	9,642	3,130	2,405	2,200	173
127	U. Massachusetts, Boston	61,186	27,715	4,992	24,580	721	2,867	311
128	Ohio U.	60,800	16,597	2,225	33,512	5,887	2,439	140
129	U. Wisconsin-Milwaukee	60,752	25,377	21,622	9,667	1,939	1,445	702
130	Colorado School of Mines C. of William and Mary and Virginia Institute of Marine Science	59,695	34,781	1,364	2,333	17,032	2,578	1,607
131	Wichita State U.	59,015	33,320	3,147	18,293	980	2,677	598
132	South Dakota State U.	58,859	10,424	7,332	9,981	30,942	171	9
133	U. Memphis	58,334	29,524	16,469	5,320	984	4,922	1,115
134	U. Montana, Missoula	55,566	21,898	4,198	25,543	2,097	1,660	170
135	U. Montana, Missoula	55,032	30,319	1,678	18,748	548	922	2,817
136	Wright State U.	54,985	27,838	10,052	14,508	1,757	824	6

**Appendix B₂. Higher Education R&D Expenditures at Public Institutions, ranked by FY 2014
Total R&D Expenditures: FYs 2005–14 (Top 300 Institutions)**

(Dollars in thousands)

Rank	Institution	All R&D expenditures	Source of Funds					
			Federal government	State and local government	Institution funds	Business	Nonprofit organizations	All other sources
138	Portland State U.	54,787	33,523	8,587	7,028	743	4,058	848
139	U. Alabama, Tuscaloosa	53,140	26,161	7,137	16,641	2,060	447	694
140	CUNY, City C.	52,654	40,095	2,464	8,118	752	165	1,060
141	U. Southern Mississippi	51,938	26,163	7,453	10,979	6,044	860	439
142	U. Wyoming	51,422	42,280	3,798	2,003	2,257	557	527
143	U. Maryland, Center for Environmental Science	50,814	13,202	5,352	25,694	0	NA	6,566
144	U. California, Office of the President	50,103	248	15,104	29,531	0	5,051	169
145	New Mexico Institute of Mining and Technology	48,338	33,245	8,163	307	6,623	0	0
146	U. Texas, San Antonio	47,061	23,066	12,028	7,730	581	1,342	2,314
147	U. North Texas, Health Science Center	47,002	21,943	12,249	8,558	2,981	1,219	52
148	Florida A&M U.	46,367	36,570	1,509	7,311	719	258	0
149	New Orleans	45,486	34,637	612	5,000	1,664	3,373	200
150	U.S. Air Force Academy	44,663	34,669	45	9,100	748	19	82
151	U. North Texas, Denton	44,180	16,318	859	22,516	1,797	2,288	402
152	San Jose State U.	43,509	32,901	3,814	4,446	748	807	793
153	U. South Alabama	41,681	14,353	390	25,091	1,847	0	0
154	U. Puerto Rico, Medical Sciences Campus	40,444	30,197	2,133	6,078	1,864	172	0
155	U. Nevada, Las Vegas	39,448	26,950	2,691	6,072	651	292	2,792
156	Texas State U.	39,265	14,243	5,096	15,328	1,018	3,580	0
157	Missouri U. of Science and Technology	39,065	21,811	180	10,997	4,507	433	1,137
158	CUNY, Hunter C.	38,879	19,268	1,095	15,574	154	2,406	382
159	Texas Tech U., Health Sciences Center	38,015	9,853	15,169	8,752	466	2,011	1,764
160	North Carolina Agricultural and Technical State U.	35,047	23,373	141	11,080	7	446	0
161	SUNY, Upstate Medical U.	33,460	21,334	1,431	5,155	2,256	2,978	306
162	SUNY, Health Science Center Brooklyn	33,331	25,802	31	2,443	397	1,898	2,760
163	Alabama A&M U.	32,907	22,428	2,012	6,265	414	226	1,562
164	Northern Arizona U.	31,590	18,209	5,909	5,858	762	741	111
165	U. South Dakota	30,700	12,162	1,185	16,096	72	1,168	17
166	East Carolina U.	29,925	17,409	1,311	6,681	2,221	2,210	93
167	San Francisco State U.	29,457	17,129	1,418	9,344	109	1,405	52
168	U. Missouri, Kansas City	29,164	15,178	115	11,548	490	1,165	668
169	U. Puerto Rico, Rio Piedras	28,793	18,262	277	9,953	3	274	24
170	U. Massachusetts, Dartmouth	28,219	8,549	1,742	17,432	180	274	42
171	Rutgers, State U. New Jersey, Newark	28,083	12,520	6,518	5,803	236	2,536	470
172	Jackson State U.	26,609	21,677	1,164	2,756	0	897	115
173	Boise State U.	26,568	15,746	1,848	7,781	216	970	7
174	Kent State U.	25,666	11,181	3,878	8,600	619	1,170	218
175	Louisiana State U., Medical Center, Shreveport	25,004	8,490	279	9,732	1,663	4,840	0
176	U. California, Merced	23,916	10,509	568	10,880	354	470	1,135
177	Air Force Institute of Technology	23,902	16,782	37	6,989	81	0	13
178	Desert Research Institute	23,778	19,932	805	2,088	390	563	0
179	CUNY, Queens C.	23,434	16,460	162	6,309	136	104	263
180	U. North Carolina, Charlotte	23,342	19,069	897	512	1,484	1,349	31
181	Texas Tech U., Health Sciences Center, El Paso	23,282	5,352	15,285	1,921	245	327	152
182	Florida Atlantic U.	22,997	13,234	580	3,208	811	2,696	2,468

**Appendix B₂. Higher Education R&D Expenditures at Public Institutions, ranked by FY 2014
Total R&D Expenditures: FYs 2005–14 (Top 300 Institutions)**

(Dollars in thousands)

Rank	Institution	All R&D expenditures	Source of Funds					
			Federal government	State and local government	Institution funds	Business	Nonprofit organizations	All other sources
183	Louisiana Tech U.	22,942	7,742	1,815	12,553	803	29	0
184	U. Minnesota, Duluth	21,904	5,940	3,615	11,566	471	135	177
185	Texas A&M U.-Kingsville	21,819	8,678	3,916	3,296	337	5,592	0
186	Texas A&M U.-Corpus Christi	21,321	7,176	5,220	3,768	580	1,666	2,911
187	Miami U.	21,216	12,048	1,087	6,657	1,071	321	32
188	U. North Carolina, Greensboro	20,723	13,489	589	5,672	131	320	522
189	U. New Orleans	20,614	9,490	2,170	5,968	1,199	1,105	682
190	Idaho State U.	20,610	11,091	5,952	2,471	583	302	211
191	Marshall U.	20,382	12,712	1,621	4,208	622	1,219	0
192	U. of the Virgin Islands	20,371	14,992	2,967	706	0	0	1,706
193	Georgia Southern U.	20,245	3,247	40	6,599	10,245	114	0
194	Tennessee State U.	20,068	12,016	880	6,850	321	1	0
195	U. West Florida	19,579	11,593	2,928	3,172	1,294	592	0
196	Illinois State U.	19,159	5,213	777	12,248	172	682	67
197	SUNY, C. of Environmental Science and Forestry	19,027	5,564	4,235	7,273	1,299	512	144
198	Western Michigan U. and Homer Stryker M.D. School of Medicine	18,942	11,334	301	4,283	1,676	462	886
199	Southern Illinois U., Edwardsville	18,915	2,249	925	13,586	1,924	219	12
200	U. Puerto Rico, Mayaguez	18,734	14,306	661	1,446	1,235	174	912
201	U. Missouri, Saint Louis	18,618	5,844	135	10,678	196	904	861
202	Delaware State U.	17,679	12,464	636	4,318	261	0	0
203	U. Alaska, Anchorage	17,150	7,824	3,275	4,976	338	697	40
204	Northern Illinois U.	16,427	9,174	206	6,163	476	408	0
205	Northeast Ohio Medical U.	15,916	6,582	1,001	6,371	60	1,901	1
206	Morgan State U.	15,720	14,144	1,300	NA	226	13	37
207	Oakland U.	15,196	6,885	144	6,663	1,146	177	181
208	California Polytechnic State U., San Luis Obispo	15,096	9,087	2,108	1,424	1,497	974	6
209	Central Michigan U.	15,015	6,187	8	7,919	390	456	55
210	U.S. Military Academy	14,819	14,819	0	0	0	0	0
211	Fayetteville State U.	14,732	10,186	633	3,660	161	92	0
212	U. North Carolina, Wilmington	14,648	6,063	5,574	2,183	289	534	5
213	Winthrop U.	13,981	7,955	1,695	4,272	18	41	0
214	California State U., San Bernardino	13,582	6,414	4,210	2,704	64	0	190
215	South Carolina State U.	13,147	10,306	1,415	1,416	10	0	NA
216	California State U., Sacramento	13,136	5,241	5,011	1,881	495	490	18
217	California State U., Northridge	12,991	11,309	1,069	60	74	478	1
218	Prairie View A&M U.	12,292	8,278	2,659	1,243	0	112	0
219	U. Texas Pan American	11,739	7,205	1,345	2,230	344	599	16
220	U. Southern Maine	11,714	4,382	5,381	1,378	6	518	49
221	North Carolina Central U.	11,537	9,757	293	NA	26	1,185	276
222	Montana Tech of U. Montana	11,348	3,202	5,434	2,094	618	0	0
223	Tarleton State U.	10,996	3,683	3,072	3,696	48	497	0
224	U.S. Naval Academy	10,861	10,416	0	371	0	74	0
225	South Dakota School of Mines and Technology	10,524	7,078	1,572	663	258	164	789
226	California State U., Long Beach	10,097	7,879	1,126	NA	470	189	433
226	Tennessee Technological U.	10,097	3,725	3,667	2,475	24	48	158
228	Alcorn State U.	10,060	7,447	314	2,124	49	126	0

**Appendix B₂. Higher Education R&D Expenditures at Public Institutions, ranked by FY 2014
Total R&D Expenditures: FYs 2005–14 (Top 300 Institutions)**

(Dollars in thousands)

Rank	Institution	All R&D expenditures	Source of Funds					
			Federal government	State and local government	Institution funds	Business	Nonprofit organizations	All other sources
229	C. Charleston	10,034	5,051	333	3,152	398	940	160
230	Florida Gulf Coast U.	9,626	4,609	2,091	560	371	1,995	0
231	CUNY, Brooklyn C.	9,407	6,548	58	2,297	193	63	248
232	U. Nebraska, Omaha	9,222	5,687	445	2,822	88	180	0
233	Ball State U.	9,209	1,971	217	6,301	443	277	0
234	U. Maryland, Eastern Shore	8,982	8,902	40	0	0	29	11
235	Rhode Island C.	8,938	6,960	903	871	0	204	0
236	Bowling Green State U.	8,861	6,576	176	1,363	372	0	374
237	CUNY, John Jay C. of Criminal Justice	8,633	3,214	0	2,982	1,208	678	551
238	Western Washington U.	8,567	4,039	353	3,623	255	297	0
239	Langston U.	8,512	5,816	2,696	0	0	0	0
240	Virginia State U.	8,374	5,424	93	2,772	0	0	85
241	Humboldt State U.	8,306	2,504	2,013	1,659	604	643	883
242	California State U., San Marcos	8,302	6,091	320	1,224	42	625	0
243	Western Kentucky U.	8,280	3,383	398	4,273	0	222	4
244	Rowan U.	8,202	4,591	405	1,823	785	598	0
245	Grand Valley State U.	8,198	2,151	126	3,614	25	2,107	175
246	U. Michigan, Dearborn	8,176	2,901	50	3,820	1,276	127	2
247	Purdue U., Calumet	8,166	4,356	650	2,458	407	295	0
248	California State U., Fresno	8,109	2,921	2,202	2,119	212	648	7
249	Arkansas State U., Jonesboro	8,099	3,958	3,202	876	29	34	0
250	U. Arkansas, Little Rock	8,068	5,188	740	1,425	169	546	0
251	Salisbury U.	7,923	3,131	2,078	2,339	52	323	0
252	California State U., Fullerton	7,919	6,932	38	674	56	155	64
253	Indiana U.-Purdue U., Fort Wayne	7,882	1,479	745	4,127	21	586	924
254	East Tennessee State U.	7,836	5,484	79	539	813	840	81
255	CUNY, Graduate Center	7,797	2,310	263	1,790	0	1,611	1,823
256	National Defense U.	7,682	7,682	0	0	0	0	0
257	U. Washington, Bothell	7,550	2,005	167	942	34	4,388	14
258	U. Texas, Brownsville	7,400	5,762	898	700	0	40	0
259	West Virginia State U.	7,221	6,006	846	197	0	0	172
260	U. Guam	7,075	6,599	161	230	55	30	0
261	Norfolk State U.	6,936	6,492	0	0	0	0	444
262	U. South Florida, Saint Petersburg	6,908	2,768	191	3,520	139	290	0
263	U. Texas, Tyler	6,894	4,601	77	2,117	99	0	0
264	Lincoln U., Jefferson City	6,742	5,460	1,282	0	0	0	0
265	U. Tennessee, Chattanooga	6,239	1,501	606	3,252	119	280	481
266	Texas Southern U.	6,038	3,512	170	2,067	83	206	0
267	U. Massachusetts, Central Office	5,875	3,468	1,333	680	8	360	26
268	Kentucky State U.	5,694	4,335	1,279	32	41	7	0
269	Southern U. and A&M C., Agricultural Research and Extension Center	5,606	3,363	2,210	33	0	0	0
270	Southern Connecticut State U.	5,465	1,620	909	2,340	0	596	0
271	California State Polytechnic U., Pomona	5,455	2,165	1,274	1,262	628	126	0
272	West Texas A&M U.	5,407	1,551	3,127	380	243	106	0
273	U. Colorado Colorado Springs	5,363	4,018	507	450	231	157	0
274	California State U., Los Angeles	5,172	4,923	0	155	0	94	0
275	U. Hawaii, Hilo	5,031	4,599	2	360	67	3	0

**Appendix B₂. Higher Education R&D Expenditures at Public Institutions, ranked by FY 2014
Total R&D Expenditures: FYs 2005–14 (Top 300 Institutions)**

(Dollars in thousands)

Rank	Institution	All R&D expenditures	Source of Funds					
			Federal government	State and local government	Institution funds	Business	Nonprofit organizations	All other sources
276	U. Baltimore	4,990	2,947	1,372	0	0	510	161
277	Rutgers, State U. New Jersey, Camden	4,919	1,766	583	1,113	110	1,253	94
278	Southern U. and A&M C., Baton Rouge	4,812	3,850	59	901	2	0	0
279	California State U., Monterey Bay	4,787	3,862	526	355	0	44	0
280	California State U., Dominguez Hills	4,733	4,102	287	0	0	344	0
281	James Madison U.	4,628	3,017	195	87	NA	NA	1,329
282	Fort Valley State U.	4,547	4,249	0	298	0	0	0
283	U. Wisconsin-Stevens Point	4,450	2,064	1,167	804	35	380	0
284	Middle Tennessee State U.	4,334	1,564	1,114	1,242	191	223	0
285	U. Arkansas, Pine Bluff	4,306	2,001	986	1,279	0	40	0
286	Stephen F. Austin State U.	4,298	1,850	1,295	736	203	214	0
287	Appalachian State U.	4,289	2,198	312	621	758	266	134
288	Pennsylvania State U., Erie	4,282	1,610	676	1,187	632	177	0
289	Montclair State U.	4,266	2,533	171	1,033	382	143	4
290	U. Northern Colorado	4,176	1,965	10	1,948	43	210	0
291	U. Central Arkansas	4,064	1,297	1,022	1,682	7	36	20
292	Sam Houston State U.	3,996	2,209	252	1,328	0	167	40
293	California State U., Channel Islands	3,862	528	993	2,000	0	341	0
294	Missouri State U.	3,782	3,132	133	0	439	64	14
295	CUNY, C. Staten Island	3,731	1,400	398	1,082	624	138	89
296	U. Northern Iowa	3,711	2,094	473	991	85	68	0
297	U. North Florida	3,674	1,177	669	1,388	286	154	0
298	SUNY, C. of Optometry	3,481	2,567	0	572	285	27	30
299	Youngstown State U.	3,464	1,876	857	669	62	0	0
300	Texas A&M International U.	3,441	977	953	387	141	983	0

i = imputed. NA = not available; data were not provided by institution.

NOTES: Tied institutions are ranked alphabetically. Institutions ranked are geographically separate campuses headed by a campus-level president or chancellor. Some campuses are part of large multi-campus universities; some are part of state university systems. For a complete listing of campuses that belong to a larger university or system and their aggregate R&D expenditures, see table 84.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, Higher Education Research and Development Survey, FY 2014

Appendix C. Federally Financed R&D Expenditures at Universities and Colleges, ranked by FY 2014 R&D Expenditures: FYs 2007–14 (Top 300 Institutions)

(Dollars in thousands)

Rank	Institution	2007	2008	2009	2010	2011	2012	2013	2014
	All institutions	31,240,581	32,100,859	33,442,570	37,475,234	40,767,871	40,139,567	39,444,861	37,922,314
1	Johns Hopkins U. ^a	1,374,029	1,463,709	1,597,205	1,737,261	1,884,025	1,857,580	1,898,927	1,950,016
2	U. Washington, Seattle	NA	NA	NA	829,885	948,976	909,652	928,193	909,034
3	U. Michigan, Ann Arbor	NA	NA	NA	747,778	820,125	791,729	814,167	742,160
4	Stanford U.	537,232	511,649	481,439	593,016	656,114	636,348	652,472	637,730
5	U. Pennsylvania	460,258	493,435	509,689	642,180	707,051	669,970	636,589	620,396
6	U. North Carolina, Chapel Hill	347,958	374,295	433,896	545,993	600,843	606,348	623,237	610,664
7	Columbia U. in the City of New York	459,748	461,029	491,837	572,213	645,233	645,573	635,987	608,588
8	U. California, San Diego	475,821	491,160	511,790	580,279	636,879	656,891	632,593	599,095
9	U. Pittsburgh, Pittsburgh	446,151	459,230	467,465	594,675	662,471	637,857	622,232	582,136
10	Harvard U.	419,113	418,765	426,813	474,899	543,097	589,860	594,392	572,918
11	Duke U.	459,605	452,200	439,187	514,084	585,262	587,268	581,695	557,969
12	U. Wisconsin-Madison	489,986	481,259	514,875	545,189	593,633	580,661	555,875	548,388
13	U. California, San Francisco	467,402	472,642	483,667	514,693	570,116	559,329	566,117	544,697
14	Pennsylvania State U., University Park and Hershey Medical Center	NA	NA	NA	464,750	468,705	531,421	558,871	520,574
15	Georgia Institute of Technology	261,127	281,829	323,738	372,122	427,867	484,212	522,134	512,015
16	U. Minnesota, Twin Cities	NA	NA	NA	426,359	489,480	485,462	494,206	489,767
17	Massachusetts Institute of Technology	482,014	501,531	539,160	457,575	489,080	496,132	490,809	483,891
18	Yale U.	350,933	376,314	380,576	475,794	519,844	518,184	503,227	480,384
19	U. California, Los Angeles	498,742	480,779	477,817	538,521	563,560	539,054	501,368	465,170
20	Ohio State U.	316,763	341,257	349,863	399,942	493,130	445,635	456,590	454,484
21	Cornell U.	368,468	359,407	363,695	448,085	476,583	472,673	445,116	439,770
22	U. Southern California	359,306	351,761	378,391	408,564	453,283	443,842	437,813	431,430
23	Vanderbilt U.	323,504	347,415	353,587	397,656	458,173	448,948	445,044	422,448
24	Northwestern U.	253,338	269,026	305,306	360,980	399,719	393,074	396,138	391,946
25	Washington U., Saint Louis	426,659	395,643	415,234	468,642	469,490	441,406	411,299	383,734
26	Rutgers, State U. New Jersey, New Brunswick	NA	NA	NA	224,894	239,908	279,161	295,028	360,157
27	U. Illinois, Urbana-Champaign	258,149	270,908	292,522	303,852	323,454	359,989	468,798	343,275
28	U. Maryland, College Park	224,385	241,224	250,895	297,896	338,780	340,180	342,778	333,409
29	U. Texas, Austin	314,131	351,541	335,519	350,308	355,437	354,873	372,633	332,758
30	New York U.	205,547	211,756	214,206	260,463	302,221	316,208	300,730	330,484
31	Emory U.	271,938	291,742	295,951	336,986	369,982	361,165	365,121	330,378
32	U. California, Davis	257,597	269,952	297,140	332,325	362,976	358,577	347,038	330,367
33	Case Western Reserve U.	309,522	306,760	313,774	333,689	353,470	359,000	349,487	329,320
34	U. Colorado Boulder	228,297	228,129	248,259	292,030	323,078	330,089	319,869	314,890
35	U. California, Berkeley	256,147	255,005	266,554	312,789	336,191	338,759	311,809	313,390
36	Texas A&M U., College Station and Health Science Center	237,842	257,559	272,087	288,173	291,812	269,460	314,104	311,920
37	Icahn School of Medicine at Mt. Sinai	221,397	253,319	264,914	302,770	296,835	271,722	277,517	300,667

Appendix C. Federally Financed R&D Expenditures at Universities and Colleges, ranked by FY 2014 R&D Expenditures: FYs 2007–14 (Top 300 Institutions)

(Dollars in thousands)

Rank	Institution	2007	2008	2009	2010	2011	2012	2013	2014
38	Scripps Research Institute	267,073	265,657	288,388	313,746	317,201	309,471	308,628	292,268
39	U. Arizona	270,682	278,229	288,148	308,157	327,565	331,578	338,790	290,370
40	U. Florida	247,721	240,366	242,964	279,649	306,349	305,067	296,199	289,327
41	U. Utah	175,034	171,913	192,489	227,021	264,234	273,150	301,045	288,514
42	U. Colorado Denver and Anschutz Medical Campus	216,799	215,519	266,137	285,126	307,395	315,685	296,932	285,017
43	U. Chicago	264,461	287,164	304,575	352,728	372,288	336,125	300,718	281,464
44	U. Alabama, Birmingham	269,943	304,107	302,697	325,103	344,164	306,210	290,082	280,333
45	California Institute of Technology	255,088	244,944	308,230	328,522	342,945	326,701	282,823	279,515
46	U. Rochester	282,821	277,747	296,618	322,048	337,907	308,115	299,553	266,767
47	Baylor C. of Medicine	263,146	262,498	267,130	284,072	295,529	268,753	285,230	264,641
48	Michigan State U.	187,671	169,656	177,355	214,134	240,837	268,952	260,610	261,826
49	Boston U.	234,104	236,597	256,666	302,411	305,476	275,319	267,194	257,017
50	Oregon Health and Science U.	227,441	232,208	233,774	247,054	268,777	242,337	246,491	247,740
51	U. Cincinnati	219,625	221,738	229,504	262,513	287,182	267,691	258,460	245,086
52	Purdue U., West Lafayette	NA	NA	NA	232,564	259,948	270,655	271,504	236,860
53	U. Iowa	228,526	234,559	255,101	282,465	283,627	269,734	255,329	235,527
54	U. Maryland Baltimore	164,211	169,026	169,081	208,246	229,706	231,886	242,108	224,802
55	U. South Florida, Tampa	NA	NA	NA	243,017	243,030	236,148	225,414	222,790
56	Uniformed Services U. of the Health Sciences	37,275	67,345	124,314	72,125	117,781	102,134	119,647	213,389
57	Colorado State U., Fort Collins	217,145	214,958	217,590	211,297	236,566	252,286	219,856	212,054
58	U. Hawaii, Manoa	208,196	194,508	203,453	196,275	201,700	193,722	225,359	206,810
59	U. Virginia, Charlottesville	NA	NA	NA	228,917	252,928	240,254	225,567	205,865
60	Virginia Polytechnic Institute and State U.	129,208	135,977	148,716	162,566	189,198	184,175	201,646	204,308
61	U. Miami	149,309	168,036	174,074	197,824	225,352	224,172	205,870	203,751
62	U. Illinois, Chicago	210,799	197,369	197,537	232,380	248,936	246,128	222,566	203,733
63	Carnegie Mellon U.	168,486	171,347	170,260	179,386	200,967	209,522	215,560	198,247
64	Arizona State U.	118,276	130,343	142,037	172,202	185,766	194,376	201,363	196,270
65	SUNY, U. Buffalo	151,572	158,152	154,876	167,099	182,585	193,613	204,995	189,209
66	Yeshiva U.	147,941	143,866	137,108	163,399	197,032	201,397	193,831	186,885
67	U. Texas Southwestern Medical Center	191,687	201,480	207,216	232,027	231,639	207,513	198,114	185,137
68	U. Massachusetts, Medical School	131,226	145,113	145,834	178,293	208,244	202,149	189,159	183,582
69	U. California, Irvine	170,611	179,527	178,138	194,559	209,117	206,985	198,730	182,585
70	North Carolina State U.	131,848	131,987	136,905	139,096	155,293	174,758	177,118	181,449
71	Woods Hole Oceanographic Institution	112,754	117,587	127,378	153,066	165,819	161,115	158,672	177,616
72	U. Kansas	125,300	128,306	134,257	147,598	162,721	171,043	174,021	165,442
73	Princeton U.	121,095	125,917	130,006	150,261	163,438	161,591	156,541	164,277
74	U. Texas M. D. Anderson Cancer Center	190,508	194,889	194,633	206,664	236,400	196,753	182,971	158,986
75	U. New Mexico	124,121	136,138	134,740	148,216	162,854	160,895	158,057	153,889

Appendix C. Federally Financed R&D Expenditures at Universities and Colleges, ranked by FY 2014 R&D Expenditures: FYs 2007–14 (Top 300 Institutions)

(Dollars in thousands)

Rank	Institution	2007	2008	2009	2010	2011	2012	2013	2014
76	Wake Forest U.	141,655	146,761	144,906	159,084	173,130	172,779	156,506	153,069
77	Florida State U.	124,050	121,901	127,104	134,794	140,850	140,419	148,413	151,701
78	Dartmouth C.	128,164	122,318	134,694	118,271	131,583	147,421	155,209	145,498
79	Oregon State U.	129,287	134,280	139,587	135,886	146,882	156,446	149,396	145,247
80	U. Connecticut	126,829	122,651	124,385	132,169	144,280	153,264	148,651	144,104
81	Indiana U.-Purdue U., Indianapolis	NA	NA	NA	148,672	156,607	166,825	152,578	143,386
82	U. Kentucky	158,559	159,302	147,583	171,528	179,161	159,678	150,468	142,312
83	George Washington U.	104,533	128,022	91,665	122,357	116,611	112,110	120,857	141,552
84	Virginia Commonwealth U.	96,690	106,335	104,206	144,138	153,228	142,053	135,804	138,559
85	U. Texas Health Science Center, Houston	131,879	129,277	135,087	150,324	156,790	146,424	144,235	136,145
86	Brown U.	96,288	96,233	94,485	127,087	128,628	131,994	126,559	129,248
87	Washington State U.	79,439	97,925	100,631	113,452	123,502	129,255	134,329	126,955
88	Temple U.	57,778	60,848	71,131	79,939	89,719	90,243	131,872	126,803
89	U. Georgia	107,060	105,541	109,382	119,486	137,255	137,710	131,824	126,164
90	U. California, Santa Barbara	113,335	113,298	115,453	129,457	136,244	136,352	132,960	121,045
91	U. Oklahoma, Norman and Health Science Center	91,405	96,435	100,924	105,366	118,970	133,841	132,456	118,925
92	Medical U. South Carolina	101,402	102,187	113,789	131,650	143,464	136,907	127,472	118,649
93	U. Delaware	84,189	86,005	88,357	105,454	118,673	117,072	119,756	116,340
94	Iowa State U.	98,917	104,550	97,975	109,461	117,522	118,242	121,993	116,273
95	Tufts U.	94,284	98,175	105,122	116,699	122,208	121,512	113,450	116,204
96	Utah State U.	91,953	89,940	84,970	90,581	113,871	108,501	106,985	114,959
97	Wayne State U.	114,720	116,266	117,395	132,166	134,735	126,915	119,520	113,618
98	U. Tennessee, Knoxville	NA	NA	NA	96,972	111,942	112,471	117,836	112,201
99	SUNY, Stony Brook U.	111,316	106,419	107,430	120,146	125,102	123,383	118,513	111,683
100	Medical C. Wisconsin	107,200	111,602	117,842	121,750	133,929	125,325	116,765	111,241
101	U. Massachusetts, Amherst	73,485	80,432	80,950	97,937	107,683	115,280	111,448	110,189
102	SUNY, U. Albany	105,776	108,994	97,007	124,324	125,189	112,989	114,158	105,333
103	U. Missouri, Columbia	119,545	112,814	124,796	116,965	116,403	114,345	111,510	104,910
104	U. Texas Medical Branch	118,173	122,009	126,703	128,840	128,098	109,867	108,287	101,761
105	U. New Hampshire	86,287	87,431	84,993	84,553	106,806	119,451	102,053	101,125
106	Georgetown U.	107,904	113,707	121,514	120,589	123,540	115,197	114,760	100,475
107	Naval Postgraduate School	65,946	88,846	81,330	93,605	94,278	127,049	91,134	96,573
108	Louisiana State U., Baton Rouge	81,072	80,583	89,593	97,407	97,517	92,551	94,563	94,701
109	Tulane U.	98,612	109,561	109,659	106,872	111,007	101,360	97,994	94,486
110	U. Nebraska, Lincoln	81,044	82,732	84,455	96,069	105,724	104,579	98,235	94,265
111	U. South Carolina, Columbia	NA	NA	NA	125,501	103,296	98,836	91,612	91,890
112	U. California, Santa Cruz	69,122	70,919	77,253	84,518	97,817	94,222	91,002	90,858
113	U. Texas Health Science Center, San Antonio	95,610	121,758	129,399	121,723	121,200	106,177	99,198	89,303
114	U. Alaska, Fairbanks	101,219	97,356	92,244	99,657	105,469	99,674	94,953	85,904

Appendix C. Federally Financed R&D Expenditures at Universities and Colleges, ranked by FY 2014 R&D Expenditures: FYs 2007–14 (Top 300 Institutions)

(Dollars in thousands)

Rank	Institution	2007	2008	2009	2010	2011	2012	2013	2014
115	Indiana U., Bloomington	NA	NA	NA	71,208	74,143	79,727	85,852	84,592
116	Rockefeller U.	86,728	81,557	73,906	88,705	97,710	84,616	80,384	81,820
117	New Mexico State U.	102,367	86,715	89,450	98,399	90,598	90,722	86,806	80,599
118	U. Vermont	90,419	90,220	92,760	98,635	101,471	87,843	85,118	79,743
119	U. Notre Dame	54,491	67,497	57,953	62,152	79,716	83,295	79,564	79,690
120	Northeastern U.	38,843	38,861	40,031	59,074	67,938	77,667	85,170	79,666
121	Florida International U.	62,366	60,045	57,371	62,580	65,446	69,402	72,357	78,961
122	Drexel U.	67,467	65,868	68,514	77,438	83,702	87,860	76,343	77,684
123	U. Nebraska, Medical Center	53,506	51,300	61,224	80,784	86,295	84,196	80,750	76,195
124	U. Alabama, Huntsville	50,504	49,030	55,152	73,075	72,665	78,528	85,738	75,343
125	U. Oregon	57,708	65,135	70,628	76,378	84,997	86,316	75,423	74,603
126	Rice U.	54,662	55,177	56,524	69,395	78,730	76,964	80,075	73,965
127	Montana State U., Bozeman	82,917	78,728	81,208	93,100	87,528	86,511	73,619	72,777
128	Mississippi State U.	106,804	106,159	104,121	106,324	98,998	96,689	74,075	71,715
129	U. Central Florida	60,735	68,806	73,742	69,331	69,098	78,411	76,533	70,716
130	West Virginia U.	67,159	71,075	68,741	79,415	88,419	82,149	74,704	69,165
131	Kansas State U.	48,383	54,491	59,444	68,560	76,953	77,689	70,167	67,438
132	U. Dayton	61,352	65,621	71,361	73,540	70,996	65,169	67,698	66,318
133	U. Louisville	78,070	74,581	78,614	93,260	96,010	89,976	78,144	65,849
134	U. Rhode Island	52,561	51,791	58,762	62,981	78,303	83,754	74,870	65,715
135	U. Mississippi and U. Mississippi, Jackson, Medical Center	80,317	69,076	65,028	71,475	74,918	74,955	64,590	64,218
136	George Mason U.	48,452	52,908	60,694	63,011	65,301	63,786	65,096	61,877
137	Rensselaer Polytechnic Institute	49,153	47,491	48,509	54,847	59,284	62,341	60,870	59,070
138	U. Houston	42,644	43,845	42,450	52,920	59,580	55,812	61,038	58,954
139	U. California, Riverside	61,059	58,670	58,586	63,127	62,312	63,821	59,065	57,397
140	U. Arkansas for Medical Sciences	60,836	62,035	61,249	72,217	75,924	69,883	64,856	55,556
141	Thomas Jefferson U.	81,545	76,034	73,152	77,817	80,027	68,976	56,247	54,676
142	New Jersey Institute of Technology	41,330	40,087	42,656	50,051	54,250	59,398	57,466	54,655
143	Rush U.	39,601	40,942	43,608	51,304	57,978	57,512	57,063	53,501
144	U. Nevada, Reno	63,924	66,777	64,720	58,115	57,220	55,437	56,900	53,363
145	U. Idaho	46,273	46,235	43,207	46,303	54,243	55,115	53,986	50,638
146	U. Maine	44,919	41,740	47,785	50,163	59,800	39,661	34,252	50,589
147	San Diego State U.	34,792	38,038	44,250	56,504	64,056	56,797	51,274	50,542
148	Auburn U., Auburn	NA	NA	NA	53,971	59,559	55,557	57,253	50,088
149	Clemson U.	54,394	56,944	57,232	62,934	52,919	51,764	52,002	49,887
150	Georgia Regents U. □	na	na	na	na	na	na	47,913	47,771
151	U. Maryland, Baltimore County	49,696	50,698	54,455	59,448	61,172	45,014	44,662	47,538
152	Brandeis U.	41,366	38,204	40,817	43,669	48,235	44,532	45,337	47,532
153	Cleveland State U.	6,282	5,496	4,356	25,024	42,575	46,645	50,243	44,233
154	U. Wyoming	25,579	29,018	30,144	45,323	48,932	57,441	53,971	42,280

Appendix C. Federally Financed R&D Expenditures at Universities and Colleges, ranked by FY 2014 R&D Expenditures: FYs 2007–14 (Top 300 Institutions)

(Dollars in thousands)

Rank	Institution	2007	2008	2009	2010	2011	2012	2013	2014
155	Georgia State U.	28,205	30,248	28,364	27,073	28,210	34,075	37,521	42,259
156	Cold Spring Harbor Laboratory	ne	ne	ne	ne	51,529	43,874	41,002	41,845
157	U. Tennessee, Health Science Center	NA	NA	NA	52,652	51,842	48,473	42,269	41,830
158	Old Dominion U.	32,976	35,421	36,433	34,687	39,534	38,555	39,963	41,270
159	U. North Dakota	44,625	46,620	49,240	52,504	54,058	54,476	46,491	40,340
160	CUNY, City C.	21,866	22,027	23,238	32,900	40,595	39,572	40,094	40,095
161	Oklahoma State U., Stillwater	NA	NA	NA	56,998	81,855	85,876	44,200	36,687
162	Florida A&M U.	14,502	23,657	23,535	45,856	44,905	42,937	39,675	36,570
163	North Dakota State U.	46,345	50,682	44,343	51,883	53,451	46,490	38,453	36,277
164	U. Texas, El Paso	27,218	26,996	29,507	34,617	35,399	40,024	38,253	35,304
165	Colorado School of Mines	18,248	20,072	25,109	29,892	33,789	33,481	32,399	34,781
166	U. Toledo	32,801	29,676	29,707	38,389	44,881	41,072	40,497	34,684
167	U.S. Air Force Academy	16,142	44,935	38,795	49,711	62,118	43,431	45,169	34,669
168	Louisiana State U., Health Sciences Center – New Orleans	54,690	43,865	43,398	46,142	45,581	40,637	36,886	34,637
169	Portland State U.	20,813	23,727	31,917	36,996	41,580	42,662	40,377	33,523
170	C. of William and Mary and Virginia Institute of Marine Science	33,045	31,357	30,665	27,685	30,361	32,526	31,628	33,320
171	New Mexico Institute of Mining and Technology	69,050	64,322	61,178	42,243	37,316	29,894	23,581	33,245
172	Texas Tech U.	23,961	21,392	25,651	35,970	35,191	29,969	28,827	33,137
173	Morehouse School of Medicine	23,230	24,985	23,583	25,855	28,128	31,786	34,511	33,020
174	San Jose State U.	28,188	29,151	33,299	24,292	26,389	24,153	27,780	32,901
175	U. Texas, Dallas	17,783	21,383	26,244	30,754	33,216	35,297	33,920	32,699
176	Howard U.	34,251	35,873	31,938	33,017	36,060	37,690	33,966	32,663
177	Loyola U., Chicago	25,148	23,481	23,855	28,995	28,633	28,530	33,074	31,189
178	Michigan Technological U.	28,226	29,944	27,263	27,676	32,724	33,189	32,086	30,588
179	U. Montana, Missoula	33,953	34,497	36,888	40,760	38,565	35,984	34,021	30,319
180	U. Puerto Rico, Medical Sciences Campus	31,955	28,481	33,841	29,813	54,381	35,173	31,037	30,197
181	Saint Louis U.	49,588	49,434	33,736	33,728	38,323	35,873	31,645	30,071
182	South Dakota State U.	17,064	20,929	24,356	38,368	41,904	41,975	33,231	29,524
183	Syracuse U.	32,230	33,566	31,000	33,796	33,850	33,156	27,729	29,404
184	U. Massachusetts, Lowell	20,759	23,284	23,933	25,550	27,960	26,786	27,360	28,654
185	Eastern Virginia Medical School	20,620	17,499	24,083	29,291	25,319	24,694	28,728	28,532
186	Wright State U.	22,229	21,315	22,789	24,785	27,422	25,552	26,888	27,838
187	U. Massachusetts, Boston	16,104	17,149	18,378	24,527	26,958	33,275	24,924	27,715
188	U. Nevada, Las Vegas	49,347	42,314	32,033	32,441	30,457	25,068	24,502	26,950
189	U. Southern Mississippi	43,972	42,820	41,978	37,054	40,984	37,524	28,694	26,163
190	U. Alabama, Tuscaloosa	27,953	23,788	24,283	26,364	32,999	33,023	28,375	26,161
191	U. Arkansas, Fayetteville	38,831	33,066	33,184	33,674	37,587	34,189	30,625	26,111
192	SUNY, Health Science Center Brooklyn	23,232	25,299	22,849	25,023	33,964	34,884	31,972	25,802

Appendix C. Federally Financed R&D Expenditures at Universities and Colleges, ranked by FY 2014 R&D Expenditures: FYs 2007–14 (Top 300 Institutions)

(Dollars in thousands)

Rank	Institution	2007	2008	2009	2010	2011	2012	2013	2014
193	Illinois Institute of Technology	20,930	20,230	17,705	28,349	34,858	27,767	28,319	25,679
194	U. Wisconsin-Milwaukee	23,982	21,710	24,868	29,042	30,479	28,862	26,450	25,377
195	Boston C.	21,227	22,585	24,324	33,290	31,953	30,855	27,975	25,115
196	U. Texas, Arlington	20,259	20,927	25,144	31,628	30,659	33,150	30,815	24,857
197	Brigham Young U., Provo	19,436	19,819	20,800	22,115	24,273	22,069	23,639	24,490
198	Lehigh U.	23,559	22,739	19,724	23,721	22,390	23,312	24,831	24,271
199	Stevens Institute of Technology	26,800	20,461	20,620	29,370	32,570	27,420	24,812	23,656
200	North Carolina Agricultural and Technical State U.	15,453	18,506	18,550	23,883	22,652	22,477	21,663	23,373
201	U. Texas, San Antonio	21,669	22,574	26,966	28,717	31,972	32,672	29,078	23,066
202	Alabama A&M U.	8,467	5,566	10,265	22,154	23,988	23,778	23,451	22,428
203	U. North Texas, Health Science Center	19,203	19,818	20,215	25,847	26,132	26,627	24,187	21,943
204	U. Memphis	22,872	20,293	19,024	20,654	20,348	22,142	18,619	21,898
205	Missouri U. of Science and Technology	18,798	22,353	23,548	28,239	27,961	23,731	25,571	21,811
206	Jackson State U.	30,980	35,221	37,321	39,457	43,001	39,511	29,700	21,677
207	SUNY, Upstate Medical U.	27,933	23,117	21,828	27,959	28,663	27,013	23,730	21,334
208	SUNY, Polytechnic Institute	na	na	na	na	na	na	na	21,208
209	Southern Methodist U.	13,117	13,123	11,254	13,312	18,502	16,640	14,274	20,611
210	U. Akron	11,277	9,362	11,030	12,107	12,962	16,768	19,658	20,263
211	Desert Research Institute	30,752	30,703	29,544	28,307	28,489	27,294	22,814	19,932
212	Mercer U.	11,075	12,012	13,377	18,778	17,904	19,963	19,411	19,666
213	Worcester Polytechnic Institute	10,146	10,650	10,938	13,582	15,714	12,968	17,003	19,643
214	Rochester Institute of Technology	14,572	15,597	19,707	23,254	20,396	19,394	18,379	19,465
215	Charles R. Drew U. of Medicine and Science	48,580	43,291	53,110	20,430	20,679	19,733	17,144	19,412
216	CUNY, Hunter C.	16,473	15,833	19,487	18,498	22,901	24,265	22,512	19,268
217	Loma Linda U.	24,666	32,350	29,114	29,284	32,187	24,884	26,253	19,088
218	U. North Carolina, Charlotte	13,858	12,038	14,202	17,284	15,930	19,230	20,994	19,069
219	U. Puerto Rico, Rio Piedras	16,114	25,382	19,376	21,717	24,887	25,407	17,946	18,262
220	Northern Arizona U.	12,409	13,310	13,345	15,070	17,765	16,015	15,638	18,209
221	Meharry Medical C.	31,263	31,035	23,829	24,302	26,779	23,467	21,135	17,754
222	East Carolina U.	10,472	11,351	17,633	16,113	19,675	17,838	18,227	17,409
223	Catholic U. of America	15,533	15,223	16,029	15,878	19,890	17,608	17,310	17,205
224	San Francisco State U.	12,430	10,149	13,249	15,601	17,337	17,075	19,024	17,129
225	Air Force Institute of Technology	6,774	8,274	12,197	15,474	20,196	19,579	18,739	16,782
226	Ohio U.	18,641	18,274	16,783	18,466	23,051	20,780	20,203	16,597
227	CUNY, Queens C.	7,676	9,245	9,519	13,642	15,573	14,897	15,443	16,460
228	U. North Texas, Denton	7,815	9,045	10,870	14,444	14,754	18,043	16,515	16,318
229	Southern Illinois U., Carbondale	17,724	17,499	19,223	22,209	23,696	22,055	18,398	16,288
230	Boise State U.	10,345	9,370	9,938	14,614	18,811	20,070	16,117	15,746

Appendix C. Federally Financed R&D Expenditures at Universities and Colleges, ranked by FY 2014 R&D Expenditures: FYs 2007–14 (Top 300 Institutions)

(Dollars in thousands)

Rank	Institution	2007	2008	2009	2010	2011	2012	2013	2014
231	U. Tennessee, Knoxville, Institute of Agriculture	NA	NA	NA	12,527	15,512	17,786	17,493	15,342
232	U. Missouri, Kansas City	19,144	17,263	15,976	16,391	18,988	17,522	15,774	15,178
233	U. of the Virgin Islands	12,561	12,770	16,628	28,369	16,338	22,605	15,627	14,992
234	SUNY, Binghamton U.	15,207	15,497	18,119	20,979	21,244	21,162	17,715	14,843
235	U.S. Military Academy	7,248	9,420	8,641	22,146	13,799	12,227	11,630	14,819
236	U. South Alabama	16,676	15,907	15,883	14,730	16,758	13,816	13,743	14,353
237	U. Puerto Rico, Mayaguez	12,366	11,913	12,673	12,735	18,568	19,949	14,414	14,306
238	Texas State U.	3,091	3,237	8,312	8,904	10,319	11,950	14,908	14,243
239	U. Denver	11,671	12,306	14,126	13,364	14,042	11,779	15,089	14,202
240	Tuskegee U.	12,562	13,165	14,700	12,309	12,397	12,633	16,789	14,145
241	Morgan State U.	9,992	10,978	10,702	10,039	9,884	15,408	13,357	14,144
242	U. North Carolina, Greensboro	12,137	14,259	17,578	19,477	20,868	16,530	13,658	13,489
243	Florida Atlantic U.	18,157	17,780	15,335	17,268	15,579	17,226	13,555	13,234
244	U. Maryland, Center for Environmental Science	13,365	12,019	11,656	12,123	18,007	16,081	16,852	13,202
245	Embry-Riddle Aeronautical U.	6,419	4,631	7,424	8,241	11,444	14,048	11,456	13,030
246	Marshall U.	18,449	18,846	17,510	18,218	21,852	13,154	13,472	12,712
247	Rutgers, State U. New Jersey, Newark	NA	NA	NA	12,631	18,226	20,588	16,295	12,520
248	Delaware State U.	6,797	7,354	8,875	10,154	12,822	11,305	11,837	12,464
249	U. South Dakota	16,683	17,569	18,795	16,467	14,490	14,088	15,274	12,162
250	Miami U.	8,964	10,872	13,500	13,591	13,210	13,418	12,676	12,048
251	Tennessee State U.	8,475	7,576	7,257	7,414	8,369	10,240	9,872	12,016
252	Creighton U.	11,716	10,722	12,196	11,850	14,140	14,270	13,569	11,690
253	U. West Florida	12,349	10,167	10,265	11,038	13,156	12,858	12,927	11,593
254	New York Medical C.	26,101	23,107	22,253	21,095	21,013	16,471	13,806	11,421
255	Western Michigan U. and Homer Stryker M.D. School of Medicine	17,550	19,169	15,663	19,738	18,736	14,378	12,322	11,334
256	California State U., Northridge	11,874	11,372	11,686	17,213	19,769	24,837	7,906	11,309
257	Kent State U.	11,813	13,784	14,748	14,586	15,085	14,882	11,506	11,181
258	Hampton U.	23,836	20,910	12,662	14,455	12,292	15,356	12,620	11,153
259	Idaho State U.	11,989	13,363	12,701	14,645	17,149	16,095	13,206	11,091
260	U. Louisiana, Lafayette	11,099	13,079	13,641	12,881	14,659	13,848	11,090	10,666
261	U. California, Merced	3,119	4,852	8,025	9,392	10,140	11,052	10,983	10,509
262	Wichita State U.	22,251	23,846	18,598	13,751	20,569	19,078	13,434	10,424
263	U.S. Naval Academy	7,806	8,928	10,450	10,750	10,243	9,322	10,482	10,416
264	South Carolina State U.	2,587	6,766	7,037	6,334	8,630	10,926	10,776	10,306
265	Fayetteville State U.	7,673	7,500	9,110	10,844	10,029	11,187	11,906	10,186
266	Texas Tech U., Health Sciences Center	8,765	8,995	11,274	12,950	14,790	13,944	14,820	9,853
267	North Carolina Central U.	4,337	6,323	5,055	6,870	9,496	11,076	8,253	9,757
268	Rosalind Franklin U. of Medicine and Science	7,689	6,936	7,246	8,350	9,317	10,084	11,202	9,754

Appendix C. Federally Financed R&D Expenditures at Universities and Colleges, ranked by FY 2014 R&D Expenditures: FYs 2007–14 (Top 300 Institutions)

(Dollars in thousands)

Rank	Institution	2007	2008	2009	2010	2011	2012	2013	2014
269	Albany Medical C.	9,521	10,239	12,653	15,758	13,884	11,845	10,278	9,716
270	U. New Orleans	15,628	14,346	15,078	19,244	19,000	14,521	11,051	9,490
271	American U.	8,383	10,424	10,023	8,841	9,208	7,515	10,421	9,427
272	Northern Illinois U.	13,123	11,639	17,225	17,334	11,807	12,861	12,415	9,174
273	California Polytechnic State U., San Luis Obispo	5,678	7,770	12,284	11,637	8,658	10,125	10,280	9,087
274	Columbia U., Teachers C.	7,662	7,622	7,357	6,533	8,526	10,173	8,494	8,909
275	U. Maryland, Eastern Shore	3,402	5,746	7,215	8,583	8,587	6,965	8,511	8,902
276	Texas A&M U.-Kingsville	5,067	3,364	6,072	7,088	6,280	6,480	7,002	8,678
277	Florida Institute of Technology	6,073	7,199	8,085	9,175	7,637	7,500	7,543	8,581
278	Fisk U.	6,600	2,851	5,265	7,686	4,631	4,058	6,307	8,557
279	U. Massachusetts, Dartmouth	11,843	13,543	10,804	12,236	13,657	10,979	8,860	8,549
280	Louisiana State U., Medical Center, Shreveport	NA	14,009	14,106	13,890	15,316	13,504	11,753	8,490
281	Claremont Graduate U.	1,359	1,194	2,873	5,888	5,215	8,875	8,452	8,278
281	Prairie View A&M U.	9,230	7,659	7,676	8,623	11,058	10,569	9,077	8,278
283	Marquette U.	6,896	7,134	6,876	9,381	11,291	9,968	8,756	8,191
284	Winthrop U.	ne	ne	ne	ne	3,440	5,243	7,451	7,955
285	California State U., Long Beach	12,655	13,914	10,723	12,731	12,055	11,379	10,701	7,879
286	U. Alaska, Anchorage	6,214	6,541	6,673	9,368	9,858	10,760	9,686	7,824
287	Louisiana Tech U.	4,309	6,646	8,431	10,806	11,952	9,835	8,881	7,742
288	National Defense U.	ne	ne	ne	ne	ne	ne	5,865	7,682
289	Alcorn State U.	7,874	9,525	10,711	9,256	8,655	8,598	8,321	7,447
290	Clark Atlanta U.	7,905	6,784	7,329	7,229	7,040	8,447	7,576	7,241
291	U. Texas Pan American	4,182	4,731	5,507	5,544	5,339	5,622	5,191	7,205
292	Texas A&M U.-Corpus Christi	6,651	6,233	7,166	7,869	7,506	5,446	6,129	7,176
293	South Dakota School of Mines and Technology	11,232	13,866	11,859	25,172	28,105	14,480	7,853	7,078
293	Xavier U. Louisiana	4,272	4,280	4,098	5,669	6,673	7,177	5,856	7,078
295	Rhode Island C.	ne	ne	ne	ne	2,404	9,060	8,976	6,960
296	California State U., Fullerton	5,947	7,353	9,169	13,651	16,159	12,440	11,716	6,932
297	Morehouse C.	4,935	4,822	6,993	7,857	8,460	9,063	9,226	6,919
298	Dillard U.	3,724	1,473	5,621	7,096	7,211	7,325	7,692	6,889
299	Oakland U.	5,476	5,428	5,564	7,130	9,178	9,185	7,605	6,885
300	U. Guam	6,867	5,550	4,808	4,962	5,391	5,448	5,554	6,599

i = imputed. na = not applicable; institution did not exist or did not exist as a separate entity. NA = not available; institution was not surveyed separately. ne = not eligible; institution did not meet the criteria for inclusion.

^a Johns Hopkins University includes Applied Physics Laboratory, with \$1,214,106 thousand in federally financed R&D expenditures in FY 2014.

^b The majority of expenditures included under All other surveyed institutions for FY 2009 and earlier years is accounted for by multi-campus institutions that reported a single amount prior to FY 2010.

Appendix C. Federally Financed R&D Expenditures at Universities and Colleges, ranked by FY 2014 R&D Expenditures: FYs 2007–14 (Top 300 Institutions)

(Dollars in thousands)

Rank	Institution	2007	2008	2009	2010	2011	2012	2013	2014
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NOTES: Prior to FY 2010, some institution totals for all R&D expenditures may be lower-bound estimates because the National Science Foundation did not attempt to estimate for nonresponse on non-science and engineering R&D expenditures item prior to FY 2010. Tied institutions are ranked alphabetically. Institutions ranked are geographically separate campuses headed by a campus-level president or chancellor. Some campuses are part of large multi-campus universities; some are part of state university systems. For a complete listing of campuses that belong to a larger university or system and their aggregate R&D expenditures, see table 84.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, Higher Education Research and Development Survey.

Appendix D. Higher Education R&D Expenditures, ranked by Total R&D Expenditures, for the Top 150 Institutions, by Source of Funds: FY 2014

(Dollars in thousands)

Rank	Institution	All R&D expenditures	Source of funds					
			Federal government	State and local government	Institution funds	Business	Nonprofit organizations	All other sources
	All institutions	67,154,642	37,922,314	3,869,376	15,753,517	3,724,971	3,979,951	1,904,513
1	Johns Hopkins U. ^a	2,242,478	1,950,016	7,286	86,879	56,966	134,815	6,516
2	U. Michigan, Ann Arbor	1,349,262	742,160	1,710	483,525	49,042	61,226	11,599
3	U. Washington, Seattle	1,176,340	909,034	17,431	74,629	49,963	103,278	22,005
4	U. Wisconsin-Madison	1,108,564	548,388	78,427	391,436	23,056	43,792	23,465
5	U. California, San Francisco	1,084,031	544,697	39,414	221,814	61,300	117,238	99,568
6	U. California, San Diego	1,067,388	599,095	44,660	161,325	75,948	85,676	100,684
7	Duke U.	1,036,813	557,969	884	138,665	252,366	67,516	19,413
8	U. North Carolina, Chapel Hill	989,766	610,664	25,143	240,000	33,854	65,382	14,723
9	Stanford U.	959,247	637,730	41,688	100,968	80,222	89,168	9,471
10	U. California, Los Angeles	948,197	465,170	39,923	184,970	45,193	143,823	69,118
11	Harvard U.	933,975	572,918	3,664	189,291	46,840	104,530	16,732
12	Massachusetts Institute of Technology	908,017	483,891	142	81,528	136,248	108,446	97,762
13	Columbia U. in the City of New York	890,642	608,588	15,951	124,948	35,894	80,211	25,050
14	Cornell U.	883,292	439,770	77,051	194,709	33,619	103,249	34,894
15	U. Minnesota, Twin Cities	876,870	489,767	51,934	255,968	28,164	12,845	38,192
16	U. Pittsburgh, Pittsburgh	856,806	582,136	7,523	133,831	15,008	42,208	76,100
17	Texas A&M U., College Station and Health Science Center	854,214	311,920	167,219	232,928	70,607	61,956	9,584
18	U. Pennsylvania	828,350	620,396	16,483	55,275	76,146	58,583	1,467
19	Ohio State U.	815,075	454,484	59,484	113,050	118,297	31,237	38,523
20	Pennsylvania State U., University Park and Hershey Medical Center	800,773	520,574	50,484	153,839	33,808	39,118	2,950
21	U. Texas M. D. Anderson Cancer Center	794,980	158,986	241,307	172,363	75,307	33,991	113,026
22	Yale U.	772,840	480,384	6,410	188,411	37,730	54,676	5,229
23	U. California, Berkeley	744,343	313,390	52,173	163,844	83,537	81,014	50,385
24	Georgia Institute of Technology	725,550	512,015	12,682	143,807	41,574	5,025	10,447
25	U. California, Davis	711,721	330,367	62,662	185,257	39,598	41,910	51,927
26	U. Florida	708,526	289,327	109,414	217,763	35,107	35,667	21,248
27	U. Southern California	687,222	431,430	17,848	123,990	22,551	36,434	54,969
28	Vanderbilt U.	683,890	422,448	198	204,033	30,008	23,987	3,216
29	Washington U., Saint Louis	664,752	383,734	16,647	122,857	47,129	83,014	11,371
30	Northwestern U.	645,333	391,946	2,605	165,519	18,651	66,612	NA
31	Rutgers, State U. New Jersey, New Brunswick	644,116	360,157	61,720	133,527	24,284	50,897	13,531
32	U. Illinois, Urbana-Champaign	621,733	343,275	31,986	170,247	40,971	18,427	16,827
33	U. Arizona	588,088	290,370	17,266	162,841	16,372	33,198	68,041
34	U. Texas, Austin	585,251	332,758	19,163	117,698	71,349	34,384	9,899
35	Purdue U., West Lafayette	564,923	236,860	84,591	165,484	38,945	32,175	6,868
36	Emory U.	558,600	330,378	376	158,943	31,103	33,739	4,061
37	Michigan State U.	526,906	261,826	37,710	189,184	8,077	14,988	15,121
38	New York U.	523,623	330,484	7,985	93,209	21,928	50,941	19,076
39	Virginia Polytechnic Institute and State U.	513,149	204,308	52,197	222,065	28,651	2,473	3,455

Appendix D. Higher Education R&D Expenditures, ranked by Total R&D Expenditures, for the Top 150 Institutions, by Source of Funds: FY 2014

(Dollars in thousands)

Rank	Institution	All R&D expenditures	Source of funds					
			Federal government	State and local government	Institution funds	Business	Nonprofit organizations	All other sources
40	Baylor C. of Medicine	496,314	264,641	22,725	136,385	15,547	57,016	0
41	U. South Florida, Tampa	488,641	222,790	24,494	168,980	22,893	19,914	29,570
42	U. Utah	486,140	288,514	5,206	129,960	37,697	24,340	423
43	U. Maryland, College Park	485,051	333,409	15,860	117,454	6,967	4,120	7,241
44	Icahn School of Medicine at Mt. Sinai	463,429	300,667	3,544	83,684	37,877	36,609	1,048
45	U. Iowa	449,147	235,527	8,067	166,616	17,183	21,394	360
46	North Carolina State U.	446,112	181,449	100,625	111,905	49,876	2,088	169
47	U. Texas Southwestern Medical Center	434,627	185,137	75,407	59,297	25,047	52,945	36,794
48	U. Alabama, Birmingham	428,563	280,333	1,198	102,632	25,325	19,075	0
49	Arizona State U.	426,651	196,270	25,796	168,906	15,518	13,401	6,760
50	U. Cincinnati	422,873	245,086	13,676	116,610	21,853	25,509	139
51	Case Western Reserve U.	419,011	329,320	11,423	42,445	9,852	22,337	3,634
52	SUNY, Polytechnic Institute	412,851	21,208	170,425	48,300	170,109	2,636	173
53	U. Maryland Baltimore	411,268	224,802	32,385	116,033	8,362	28,393	1,293
54	U. Colorado Denver and Anschutz Medical Campus	411,020	285,017	16,936	28,334	36,800	40,034	3,899
55	U. Chicago	390,082	281,464	760	36,345	22,179	48,942	392
56	SUNY, U. Buffalo	386,562	189,209	20,077	123,919	21,226	19,516	12,615
57	Scripps Research Institute	386,231	292,268	4,905	46,133	25,508	17,417	0
58	U. Colorado Boulder	379,475	314,890	2,338	31,985	13,159	17,103	0
59	Boston U.	367,328	257,017	46	84,070	6,390	15,070	4,735
60	California Institute of Technology	367,182	279,515	2,688	25,483	8,884	34,940	15,672
61	U. Virginia, Charlottesville	358,576	205,865	3,691	108,412	16,040	22,364	2,204
62	U. Georgia	355,471	126,164	33,272	152,051	14,048	22,783	7,153
63	U. Rochester	353,419	266,767	9,679	41,690	15,721	10,429	9,133
64	U. Illinois, Chicago	347,888	203,733	9,190	106,512	6,048	20,602	1,803
65	U. Miami	345,805	203,751	8,493	88,842	25,813	18,328	578
66	Brown U.	341,531	129,248	1,147	188,749	2,217	15,053	5,117
67	U. California, Irvine	340,056	182,585	20,639	63,022	15,263	28,873	29,674
68	U. Kentucky	328,239	142,312	48,793	97,080	13,714	11,037	15,303
69	Washington State U.	326,414	126,955	49,059	123,367	15,713	7,685	3,635
70	U. Hawaii, Manoa	324,342	206,810	8,113	88,687	3,348	6,731	10,653
71	Indiana U.-Purdue U., Indianapolis	324,261	143,386	2,933	121,875	15,914	38,800	1,353
72	Rockefeller U.	316,368	81,820	609	220,542	5,913	6,619	865
73	Oregon Health and Science U.	314,802	247,740	0	23,312	14,022	26,201	3,527
74	Iowa State U.	313,263	116,273	39,092	123,615	21,178	9,787	3,318
75	Colorado State U., Fort Collins	307,978	212,054	14,189	42,698	14,555	15,588	8,894
76	Yeshiva U.	306,826	186,885	3,348	84,749	2,972	14,923	13,949
77	U. Kansas	301,534	165,442	8,273	99,410	12,704	15,521	184
78	Princeton U.	293,274	164,277	525	93,461	7,649	25,367	1,995
79	Louisiana State U., Baton Rouge	290,076	94,701	72,062	102,390	14,174	5,385	1,364
80	U. Nebraska, Lincoln	278,299	94,265	4,415	159,038	11,920	1,581	7,080

Appendix D. Higher Education R&D Expenditures, ranked by Total R&D Expenditures, for the Top 150 Institutions, by Source of Funds: FY 2014

(Dollars in thousands)

Rank	Institution	All R&D expenditures	Source of funds					
			Federal government	State and local government	Institution funds	Business	Nonprofit organizations	All other sources
81	Uniformed Services U. of the Health Sciences	262,489	213,389	0	45,234	0	0	3,866
82	U. Connecticut	258,056	144,104	10,790	78,376	9,680	9,450	5,656
83	U. Oklahoma, Norman and Health Science Center	253,344	118,925	40,647	59,483	12,910	10,705	10,674
84	Florida State U.	252,548	151,701	4,909	81,963	1,790	11,342	843
85	Carnegie Mellon U.	251,222	198,247	2,131	11,382	23,801	6,822	8,839
86	Medical U. South Carolina	242,594	118,649	4,286	88,385	16,103	7,660	7,511
87	U. Massachusetts, Medical School	241,869	183,582	564	31,750	6,925	16,349	2,699
88	U. Missouri, Columbia	237,266	104,910	2,019	107,565	6,707	10,555	5,510
89	U. Texas Health Science Center, Houston	233,737	136,145	34,803	20,185	9,977	20,015	12,612
90	Oregon State U.	230,963	145,247	38,149	24,429	8,709	2,405	12,024
91	U. New Mexico	228,849	153,889	2,383	56,676	5,582	8,815	1,504
92	George Washington U.	227,995	141,552	1,346	51,488	2,107	30,300	1,202
93	U. California, Santa Barbara	226,693	121,045	4,712	45,243	23,865	13,688	18,140
94	Temple U.	224,101	126,803	4,901	63,073	9,691	13,695	5,938
95	Woods Hole Oceanographic Institution	220,016	177,616	298	15,240	8,638	NA	18,224
96	Wayne State U.	218,435	113,618	2,998	78,984	3,594	13,989	5,252
97	SUNY, Stony Brook U.	211,631	111,683	6,025	80,140	4,474	6,828	2,481
98	Mississippi State U.	209,729	71,715	75,679	50,644	10,970	528	193
99	U. South Carolina, Columbia	206,173	91,890	971	98,262	9,449	5,601	0
100	Indiana U., Bloomington	206,039	84,592	1,691	106,257	3,728	8,346	1,425
101	Virginia Commonwealth U.	201,858	138,559	6,692	41,883	7,347	7,377	0
102	U. Massachusetts, Amherst	200,199	110,189	12,122	64,187	6,533	5,812	1,356
103	Medical C. Wisconsin	199,713	111,241	160	58,383	8,530	18,632	2,767
104	Dartmouth C.	187,681	145,498	114	24,131	4,986	7,653	5,299
105	U. Central Florida	185,555	70,716	8,622	90,752	7,972	3,285	4,208
106	Kansas State U.	184,945	67,438	38,325	64,378	5,058	6,159	3,587
107	U. Louisville	183,376	65,849	14,433	69,111	8,175	6,919	18,889
108	U. Notre Dame	182,228	79,690	300	68,381	6,707	11,570	15,580
109	U. Tennessee, Knoxville	179,041	112,201	14,331	42,589	6,069	2,161	1,690
110	U. Texas Medical Branch	178,014	101,761	2,516	56,365	2,166	15,206	0
111	Wake Forest U.	176,380	153,069	6,230	3,447	7,794	5,828	12
112	U. Delaware	175,563	116,340	9,713	37,781	5,551	1,927	4,251
113	Georgetown U.	172,726	100,475	2,445	35,101	7,218	20,163	7,324
114	U. Texas Health Science Center, San Antonio	172,716	89,303	9,619	44,692	9,524	19,578	0

Appendix D. Higher Education R&D Expenditures, ranked by Total R&D Expenditures, for the Top 150 Institutions, by Source of Funds: FY 2014

(Dollars in thousands)

Rank	Institution	All R&D expenditures	Source of funds					
			Federal government	State and local government	Institution funds	Business	Nonprofit organizations	All other sources
115	Utah State U.	164,892	114,959	30,294	9,660	4,997	561	4,421
116	West Virginia U.	164,454	69,165	11,049	60,625	12,102	3,248	8,265
117	Clemson U.	161,070	49,887	16,933	72,058	18,135	3,432	625
118	Tufts U.	160,825	116,204	1,295	15,157	8,541	16,619	3,009
119	Texas Tech U.	159,308	33,137	22,423	86,207	9,052	8,219	270
120	Tulane U.	157,825	94,486	4,822	33,216	4,875	11,957	8,469
121	U. Alaska, Fairbanks	155,769	85,904	10,875	48,925	5,503	2,341	2,221
122	North Dakota State U.	154,437	36,277	50,395	58,722	1,242	1,378	6,423
123	U. California, Santa Cruz	151,734	90,858	2,877	28,410	9,938	8,378	11,273
124	U. New Hampshire	147,544	101,125	1,800	30,314	8,051	2,704	3,550
125	Auburn U., Auburn	142,487	50,088	29,663	48,789	6,381	1,419	6,147
126	U. Houston	140,597	58,954	29,414	29,132	11,700	7,439	3,958
127	U. Nebraska, Medical Center	139,126	76,195	3,151	34,642	7,324	17,814	0
128	Rice U.	138,536	73,965	5,612	33,247	6,390	12,309	7,013
129	New Mexico State U.	134,262	80,599	18,682	21,868	2,225	3,397	7,491
130	U. California, Riverside	133,558	57,397	9,013	40,709	6,839	7,560	12,040
131	Florida International U.	132,531	78,961	9,377	38,138	3,337	2,375	343
132	U. Arkansas for Medical Sciences	131,438	55,556	3,708	52,323	833	0	19,018
133	Drexel U.	131,170	77,684	4,888	35,512	4,547	8,539	0
134	SUNY, U. Albany	130,955	105,333	1,588	15,396	434	1,214	6,990
135	Oklahoma State U., Stillwater	126,543	36,687	30,919	52,816	4,992	692	437
136	U. Arkansas, Fayetteville	125,824	26,111	54,867	28,735	11,658	1,724	2,729
137	Georgia State U.	123,915	42,259	8,050	65,946	394	6,554	712
138	Thomas Jefferson U.	118,378	54,676	4,612	39,640	6,796	7,882	4,772
139	Northeastern U.	116,245	79,666	1,483	23,670	7,007	4,146	273
140	Montana State U., Bozeman	113,348	72,777	3,424	29,728	NA	NA	7,419
141	U. Mississippi and U. Mississippi, Jackson, Medical Center	109,922	64,218	4,762	26,059	8,411	3,700	2,772
142	U. Vermont	109,701	79,743	177	20,930	4,358	3,827	666
143	New Jersey Institute of Technology	106,081	54,655	2,823	42,734	2,010	3,473	386
144	Rensselaer Polytechnic Institute	105,608	59,070	5,624	28,587	7,100	2,112	3,115
145	U. Maine	101,247	50,589	17,031	28,727	3,470	877	553
146	U. Texas, Dallas	99,727	32,699	17,158	29,539	8,976	11,355	0
147	Naval Postgraduate School	99,032	96,573	9	1,054	417	60	919
148	George Mason U.	98,680	61,877	1,945	28,676	2,447	3,248	487
149	San Diego State U.	95,674	50,542	6,992	33,788	396	2,700	1,256
150	U. Idaho	95,594	50,638	23,365	15,606	2,121	2,007	1,857

i = imputed. NA = not available; data were not provided by institution.

^a Johns Hopkins University includes Applied Physics Laboratory, with \$1,254,294 thousand in total R&D expenditures in FY 2014.

NOTES: Tied institutions are ranked alphabetically. Institutions ranked are geographically separate campuses headed by a campus-level president or chancellor. Some campuses are part of large multi-campus universities; some are part of state university systems. For a complete listing of campuses that belong to a larger university or system and their aggregate R&D expenditures, see table 84.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, Higher Education Research and Development Survey, FY 2014.

Appendix E. Higher Education R&D Expenditures at All Institutions, ranked by All Non-Medical School R&D Expenditures (Top 300 Institutions): FY 2014

(Dollars in thousands)

Rank	Institution	All non-medical school R&D expenditures	All medical school R&D expenditures	All R&D expenditures
	All institutions	44,300,998	22,853,644	67,154,642
1	Johns Hopkins U. ^a	1,632,871	609,607	2,242,478
2	Massachusetts Institute of Technology	908,017	0	908,017
3	Texas A&M U., College Station and Health Science Center	802,556	51,658	854,214
4	U. Michigan, Ann Arbor	796,011	553,251	1,349,262
5	U. Texas M. D. Anderson Cancer Center	794,980	0	794,980
6	U. Wisconsin-Madison	786,198	322,366	1,108,564
7	U. California, Berkeley	744,343	0	744,343
8	Georgia Institute of Technology	725,550	0	725,550
9	Pennsylvania State U., University Park and Hershey Medical Center	706,551	94,222	800,773
10	Harvard U.	689,171	244,804	933,975
11	U. Minnesota, Twin Cities	625,726	251,144	876,870
12	Cornell U.	622,312	260,980	883,292
13	U. Illinois, Urbana-Champaign	621,733	0	621,733
14	U. Washington, Seattle	607,971	568,369	1,176,340
15	U. Texas, Austin	580,732	4,519	585,251
16	Purdue U., West Lafayette	564,923	0	564,923
17	U. California, San Diego	563,196	504,192	1,067,388
18	U. California, Davis	542,372	169,349	711,721
19	U. California, Los Angeles	530,246	417,951	948,197
20	Rutgers, State U. New Jersey, New Brunswick	517,652	126,464	644,116
21	Virginia Polytechnic Institute and State U.	513,149	0	513,149
22	U. Maryland, College Park	485,051	0	485,051
23	Ohio State U.	479,912	335,163	815,075
24	Michigan State U.	473,229	53,677	526,906
25	U. North Carolina, Chapel Hill	464,656	525,110	989,766
26	Columbia U. in the City of New York	453,801	436,841	890,642
27	North Carolina State U.	446,112	0	446,112
28	Stanford U.	445,338	513,909	959,247
29	U. Florida	438,097	270,429	708,526
30	U. Arizona	428,621	159,467	588,088
31	Arizona State U.	426,651	0	426,651
32	SUNY, Polytechnic Institute	412,851	0	412,851
33	Scripps Research Institute	386,231	0	386,231
34	U. Colorado Boulder	379,475	0	379,475
35	California Institute of Technology	367,182	0	367,182
36	U. Georgia	355,471	0	355,471
37	U. Southern California	338,802	348,420	687,222
38	Washington State U.	326,414	0	326,414
39	Rockefeller U.	316,368	0	316,368

Appendix E. Higher Education R&D Expenditures at All Institutions, ranked by All Non-Medical School R&D Expenditures (Top 300 Institutions): FY 2014

(Dollars in thousands)

Rank	Institution	All non-medical school R&D expenditures	All medical school R&D expenditures	All R&D expenditures
40	U. South Florida, Tampa	313,817	174,824	488,641
41	Iowa State U.	313,263	0	313,263
42	Colorado State U., Fort Collins	307,978	0	307,978
43	U. Hawaii, Manoa	294,218	30,124	324,342
44	Princeton U.	293,274	0	293,274
45	Louisiana State U., Baton Rouge	290,076	0	290,076
46	U. Utah	283,396	202,744	486,140
47	Vanderbilt U.	280,377	403,513	683,890
48	U. Nebraska, Lincoln	278,299	0	278,299
49	Brown U.	265,424	76,107	341,531
50	U. Pittsburgh, Pittsburgh	261,818	594,988	856,806
51	Carnegie Mellon U.	251,222	0	251,222
52	U. Pennsylvania	249,767	578,583	828,350
53	Florida State U.	245,158	7,390	252,548
54	Emory U.	243,335	315,265	558,600
55	Oregon State U.	230,963	0	230,963
56	Boston U.	230,382	136,946	367,328
57	U. California, Irvine	228,130	111,926	340,056
58	U. California, Santa Barbara	226,693	0	226,693
59	Woods Hole Oceanographic Institution	220,016	0	220,016
60	U. California, San Francisco	213,123	870,908	1,084,031
61	Duke U.	209,748	827,065	1,036,813
62	Mississippi State U.	209,729	0	209,729
63	U. Missouri, Columbia	208,833	28,433	237,266
64	SUNY, U. Buffalo	207,306	179,256	386,562
65	Indiana U., Bloomington	206,039	0	206,039
66	U. Massachusetts, Amherst	200,199	0	200,199
67	U. Iowa	197,316	251,831	449,147
68	George Washington U.	196,066	31,929	227,995
69	U. Kentucky	195,732	132,507	328,239
70	U. South Carolina, Columbia	193,217	12,956	206,173
71	U. Illinois, Chicago	190,216	157,672	347,888
72	U. Kansas	186,415	115,119	301,534
73	Kansas State U.	184,945	0	184,945
74	U. Notre Dame	182,228	0	182,228
75	Yale U.	181,464	591,376	772,840
76	U. Tennessee, Knoxville	179,041	0	179,041
77	U. Central Florida	178,363	7,192	185,555
78	U. Delaware	175,563	0	175,563
79	U. Connecticut	169,356	88,700	258,056
80	New York U.	168,050	355,573	523,623
81	Utah State U.	164,892	0	164,892

Appendix E. Higher Education R&D Expenditures at All Institutions, ranked by All Non-Medical School R&D Expenditures (Top 300 Institutions): FY 2014

(Dollars in thousands)

Rank	Institution	All non-medical school R&D expenditures	All medical school R&D expenditures	All R&D expenditures
82	Clemson U.	161,070	0	161,070
83	Texas Tech U.	159,308	0	159,308
84	U. Alaska, Fairbanks	155,769	0	155,769
85	North Dakota State U.	154,437	0	154,437
86	U. Oklahoma, Norman and Health Science Center	153,534	99,810	253,344
87	Northwestern U.	153,526	491,807	645,333
88	U. California, Santa Cruz	151,734	0	151,734
89	U. Virginia, Charlottesville	149,014	209,562	358,576
90	U. New Hampshire	147,544	0	147,544
91	U. New Mexico	145,433	83,416	228,849
92	Auburn U., Auburn	142,487	0	142,487
93	U. Houston	140,597	0	140,597
94	Rice U.	138,536	0	138,536
95	Temple U.	138,502	85,599	224,101
96	West Virginia U.	134,626	29,828	164,454
97	New Mexico State U.	134,262	0	134,262
98	U. Chicago	134,256	255,826	390,082
99	Oregon Health and Science U.	131,500	183,302	314,802
100	SUNY, U. Albany	130,955	0	130,955
101	U. California, Riverside	128,686	4,872	133,558
102	Oklahoma State U., Stillwater	126,543	0	126,543
103	Florida International U.	126,419	6,112	132,531
104	U. Arkansas, Fayetteville	125,824	0	125,824
105	Georgia State U.	123,915	0	123,915
106	U. Rochester	122,749	230,670	353,419
107	Northeastern U.	116,245	0	116,245
108	Montana State U., Bozeman	113,348	0	113,348
109	U. Alabama, Birmingham	110,706	317,857	428,563
110	Tufts U.	110,055	50,770	160,825
111	SUNY, Stony Brook U.	109,925	101,706	211,631
112	U. Texas Health Science Center, Houston	106,342	127,395	233,737
113	New Jersey Institute of Technology	106,081	0	106,081
114	U. Colorado Denver and Anschutz Medical Campus	105,905	305,115	411,020
115	Rensselaer Polytechnic Institute	105,608	0	105,608
116	Virginia Commonwealth U.	102,450	99,408	201,858
117	U. Maine	101,247	0	101,247
118	Tulane U.	100,510	57,315	157,825
119	U. Texas, Dallas	99,727	0	99,727
120	Naval Postgraduate School	99,032	0	99,032
121	George Mason U.	98,680	0	98,680
122	U. Miami	98,621	247,184	345,805
123	San Diego State U.	95,674	0	95,674

Appendix E. Higher Education R&D Expenditures at All Institutions, ranked by All Non-Medical School R&D Expenditures (Top 300 Institutions): FY 2014

(Dollars in thousands)

Rank	Institution	All non-medical school R&D expenditures	All medical school R&D expenditures	All R&D expenditures
124	U. Idaho	95,594	0	95,594
125	U. Rhode Island	91,706	0	91,706
126	U. Oregon	91,203	0	91,203
127	U. Cincinnati	90,250	332,623	422,873
128	U. Alabama, Huntsville	89,325	0	89,325
129	U. Texas, Arlington	89,175	0	89,175
130	Washington U., Saint Louis	87,707	577,045	664,752
131	U. Dayton	86,881	0	86,881
132	Case Western Reserve U.	83,328	335,683	419,011
133	Drexel U.	81,323	49,847	131,170
134	U. Texas, El Paso	79,537	0	79,537
135	Wayne State U.	77,372	141,063	218,435
136	Cold Spring Harbor Laboratory	76,733	0	76,733
137	U. Louisville	76,576	106,800	183,376
138	U. Mississippi and U. Mississippi, Jackson, Medical Center	75,991	33,931	109,922
139	Brandeis U.	74,992	0	74,992
140	SUNY, Binghamton U.	71,382	0	71,382
141	U. Akron	69,528	0	69,528
142	Michigan Technological U.	68,526	0	68,526
143	U. Maryland, Baltimore County	67,833	0	67,833
144	U. Louisiana, Lafayette	67,580	0	67,580
145	U. Tennessee, Knoxville, Institute of Agriculture	67,171	0	67,171
146	Old Dominion U.	67,037	0	67,037
147	Syracuse U.	66,321	0	66,321
148	U. Nevada, Reno	65,287	22,037	87,324
149	Uniformed Services U. of the Health Sciences	64,626	197,863	262,489
150	U. Massachusetts, Lowell	64,591	0	64,591
151	American U.	63,628	0	63,628
152	Cleveland State U.	61,783	0	61,783
153	U. Massachusetts, Boston	61,186	0	61,186
154	U. Wisconsin-Milwaukee	60,752	0	60,752
155	Colorado School of Mines	59,695	0	59,695
156	C. of William and Mary and Virginia Institute of Marine Science	59,015	0	59,015
157	Wichita State U.	58,859	0	58,859
158	South Dakota State U.	58,334	0	58,334
159	U. Memphis	55,566	0	55,566
160	U. North Dakota	55,515	12,080	67,595
161	U. Nebraska, Medical Center	55,458	83,668	139,126
162	U. Montana, Missoula	55,032	0	55,032
163	Portland State U.	54,787	0	54,787
164	Ohio U.	53,655	7,145	60,800

Appendix E. Higher Education R&D Expenditures at All Institutions, ranked by All Non-Medical School R&D Expenditures (Top 300 Institutions): FY 2014

(Dollars in thousands)

Rank	Institution	All non-medical school R&D expenditures	All medical school R&D expenditures	All R&D expenditures
165	Indiana U.-Purdue U., Indianapolis	53,446	270,815	324,261
166	U. Alabama, Tuscaloosa	53,140	0	53,140
167	CUNY, City C.	52,654	0	52,654
168	U. Southern Mississippi	51,938	0	51,938
169	U. Wyoming	51,422	0	51,422
170	Dartmouth C.	50,823	136,858	187,681
171	U. Maryland, Center for Environmental Science	50,814	0	50,814
172	U. Maryland Baltimore	50,271	360,997	411,268
173	U. California, Office of the President	50,103	0	50,103
174	Boston C.	49,724	0	49,724
175	New Mexico Institute of Mining and Technology	48,338	0	48,338
176	U. Texas, San Antonio	47,061	0	47,061
177	Florida A&M U.	46,367	0	46,367
178	U.S. Air Force Academy	44,663	0	44,663
179	U. North Texas, Denton	44,180	0	44,180
180	San Jose State U.	43,509	0	43,509
181	Georgetown U.	41,585	131,141	172,726
182	U. Toledo	41,356	20,544	61,900
183	U. Texas Medical Branch	41,352	136,662	178,014
184	U. Vermont	41,345	68,356	109,701
185	Wright State U.	41,016	13,969	54,985
186	U. North Texas, Health Science Center	40,423	6,579	47,002
187	Southern Illinois U., Carbondale	40,357	24,899	65,256
188	U. Nevada, Las Vegas	39,448	0	39,448
189	Texas State U.	39,265	0	39,265
190	Missouri U. of Science and Technology	39,065	0	39,065
191	CUNY, Hunter C.	38,879	0	38,879
192	Brigham Young U., Provo	38,051	0	38,051
193	U. Texas Health Science Center, San Antonio	37,070	135,646	172,716
194	Lehigh U.	37,066	0	37,066
195	Rochester Institute of Technology	35,945	0	35,945
196	North Carolina Agricultural and Technical State U.	35,047	0	35,047
197	Medical U. South Carolina	33,140	209,454	242,594
198	Alabama A&M U.	32,907	0	32,907
199	Southern Methodist U.	32,401	0	32,401
200	Northern Arizona U.	31,590	0	31,590
201	Illinois Institute of Technology	31,356	0	31,356
202	Stevens Institute of Technology	30,826	0	30,826
203	Worcester Polytechnic Institute	29,929	0	29,929
204	San Francisco State U.	29,457	0	29,457
205	U. Puerto Rico, Rio Piedras	28,793	0	28,793
206	U. Massachusetts, Dartmouth	28,219	0	28,219

Appendix E. Higher Education R&D Expenditures at All Institutions, ranked by All Non-Medical School R&D Expenditures (Top 300 Institutions): FY 2014

(Dollars in thousands)

Rank	Institution	All non-medical school R&D expenditures	All medical school R&D expenditures	All R&D expenditures
207	Rutgers, State U. New Jersey, Newark	28,083	0	28,083
208	U. Tulsa	27,077	0	27,077
209	Jackson State U.	26,609	0	26,609
210	Boise State U.	26,568	0	26,568
211	Mercer U.	26,470	3,739	30,209
212	U. Puerto Rico, Medical Sciences Campus	26,308	14,136	40,444
213	Kent State U.	25,666	0	25,666
214	Tuskegee U.	24,945	0	24,945
215	U. Missouri, Kansas City	24,148	5,016	29,164
216	U. California, Merced	23,916	0	23,916
217	Air Force Institute of Technology	23,902	0	23,902
218	Desert Research Institute	23,778	0	23,778
219	Marquette U.	23,633	0	23,633
220	CUNY, Queens C.	23,434	0	23,434
221	U. North Carolina, Charlotte	23,342	0	23,342
222	U. South Dakota	23,092	7,608	30,700
223	Louisiana Tech U.	22,942	0	22,942
224	Catholic U. of America	22,331	0	22,331
225	Saint Louis U.	22,082	22,399	44,481
226	U. Minnesota, Duluth	21,904	0	21,904
227	Texas A&M U.-Kingsville	21,819	0	21,819
228	Howard U.	21,417	19,354	40,771
229	Texas A&M U.-Corpus Christi	21,321	0	21,321
230	Miami U.	21,216	0	21,216
231	Baylor U.	20,729	0	20,729
232	U. North Carolina, Greensboro	20,723	0	20,723
233	U. New Orleans	20,614	0	20,614
234	Idaho State U.	20,610	0	20,610
235	Columbia U., Teachers C.	20,538	0	20,538
236	U. of the Virgin Islands	20,371	0	20,371
237	Georgia Southern U.	20,245	0	20,245
238	Tennessee State U.	20,068	0	20,068
239	U. West Florida	19,579	0	19,579
240	Illinois State U.	19,159	0	19,159
241	SUNY, C. of Environmental Science and Forestry	19,027	0	19,027
242	Southern Illinois U., Edwardsville	18,915	0	18,915
243	Western Michigan U. and Homer Stryker M.D. School of Medicine	18,875	67	18,942
244	U. Puerto Rico, Mayaguez	18,734	0	18,734
245	U. Missouri, Saint Louis	18,618	0	18,618
246	Florida Atlantic U.	18,398	4,599	22,997
247	U. Denver	18,183	0	18,183

Appendix E. Higher Education R&D Expenditures at All Institutions, ranked by All Non-Medical School R&D Expenditures (Top 300 Institutions): FY 2014

(Dollars in thousands)

Rank	Institution	All non-medical school R&D expenditures	All medical school R&D expenditures	All R&D expenditures
248	Charles R. Drew U. of Medicine and Science	18,086	2,600	20,686
249	Fordham U.	17,961	0	17,961
250	Delaware State U.	17,679	0	17,679
251	U. Alaska, Anchorage	17,150	0	17,150
252	Northern Illinois U.	16,427	0	16,427
253	Morgan State U.	15,720	0	15,720
254	Embry-Riddle Aeronautical U.	15,393	0	15,393
255	Oakland U.	15,189	7	15,196
256	California Polytechnic State U., San Luis Obispo	15,096	0	15,096
257	Duquesne U.	15,025	0	15,025
258	U.S. Military Academy	14,819	0	14,819
259	Fayetteville State U.	14,732	0	14,732
260	U. North Carolina, Wilmington	14,648	0	14,648
261	Texas Tech U., Health Sciences Center	14,591	23,424	38,015
262	Florida Institute of Technology	14,255	0	14,255
263	Winthrop U.	13,981	0	13,981
264	Louisiana State U., Health Sciences Center – New Orleans	13,944	31,542	45,486
265	U. South Alabama	13,847	27,834	41,681
266	Clarkson U.	13,750	0	13,750
267	Villanova U.	13,700	0	13,700
268	California State U., San Bernardino	13,582	0	13,582
269	Central Michigan U.	13,194	1,821	15,015
270	South Carolina State U.	13,147	0	13,147
271	California State U., Sacramento	13,136	0	13,136
272	California State U., Northridge	12,991	0	12,991
273	Prairie View A&M U.	12,292	0	12,292
274	U. Texas Pan American	11,739	0	11,739
275	U. Southern Maine	11,714	0	11,714
276	North Carolina Central U.	11,537	0	11,537
277	East Carolina U.	11,420	18,505	29,925
278	Montana Tech of U. Montana	11,348	0	11,348
279	Hampton U.	11,169	0	11,169
280	Tarleton State U.	10,996	0	10,996
281	U.S. Naval Academy	10,861	0	10,861
282	South Dakota School of Mines and Technology	10,524	0	10,524
283	Wellesley C.	10,127	0	10,127
284	California State U., Long Beach	10,097	0	10,097
284	Tennessee Technological U.	10,097	0	10,097
286	Marshall U.	10,072	10,310	20,382
287	Alcorn State U.	10,060	0	10,060
288	C. Charleston	10,034	0	10,034

Appendix E. Higher Education R&D Expenditures at All Institutions, ranked by All Non-Medical School R&D Expenditures (Top 300 Institutions): FY 2014

(Dollars in thousands)

Rank	Institution	All non-medical school R&D expenditures	All medical school R&D expenditures	All R&D expenditures
289	Claremont Graduate U.	9,867	0	9,867
290	Florida Gulf Coast U.	9,626	0	9,626
291	CUNY, Brooklyn C.	9,407	0	9,407
292	Xavier U. Louisiana	9,346	0	9,346
293	U. Nebraska, Omaha	9,222	0	9,222
294	Ball State U.	9,209	0	9,209
295	Clark Atlanta U.	9,192	0	9,192
296	Fairfield U.	9,155	0	9,155
297	Bryn Mawr C.	9,143	0	9,143
298	Fisk U.	9,073	0	9,073
299	U. Maryland, Eastern Shore	8,982	0	8,982
300	Rhode Island C.	8,938	0	8,938

^a Johns Hopkins University includes Applied Physics Laboratory, with \$1,254,294 thousand in total R&D expenditures in FY 2014.

NOTES: Tied institutions are ranked alphabetically. Institutions ranked are geographically separate campuses headed by a campus-level president or chancellor. Some campuses are part of large multi-campus universities; some are part of state university systems. For a complete listing of campuses that belong to a larger university or system and their aggregate R&D expenditures, see table 84.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, Higher Education Research and Development Survey, FY 2014.

i = imputed.

Appendix F. Total and Federally Financed Higher Education R&D Expenditures in the Computer Sciences for the Top 100 Institutions, ranked by FY 2014 Total: FYs 2011-14

(Dollars in thousands)

Rank	Institution	Total				Federally financed			
		2011	2012	2013	2014	2011	2012	2013	2014
	All institutions	1,741,463	1,821,305	2,068,772	1,927,356	1,293,405	1,359,559	1,552,454	1,390,011
1	Johns Hopkins U. ^a	95,389	96,331	107,516	117,178	87,812	90,806	102,719	112,544
2	Carnegie Mellon U.	95,836	109,069	124,962	110,795	84,913	95,071	101,598	90,710
3	U. Illinois, Urbana-Champaign	69,426	93,722	224,941	99,611	46,060	72,010	188,085	75,491
4	U. Southern California	100,668	99,828	102,538	98,832	96,637	95,438	97,694	90,985
5	Georgia Institute of Technology	77,966	86,061	100,747	98,562	57,370	66,408	78,398	73,372
6	Massachusetts Institute of Technology	50,127	58,932	68,138	76,633	35,120	37,146	46,744	50,174
7	U. Texas, Austin	62,366	64,639	90,972	59,311	52,665	51,173	79,773	50,981
8	Pennsylvania State U., University Park and Hershey Medical Center	41,648	39,534	56,267	52,372	32,822	34,877	50,593	46,692
9	U. Maryland, College Park	39,215	45,399	38,053	36,838	25,572	31,209	28,354	23,655
10	U. California, San Diego	35,918	48,703	37,929	34,501	16,797	25,486	17,755	14,187
11	U. Utah	24,172	23,463	28,992	31,500	15,577	15,420	19,934	22,882
12	Indiana U., Bloomington	19,691	17,055	24,010	28,934	6,869	9,879	15,183	18,090
13	U. Tennessee, Knoxville	25,965	25,476	31,816	27,808	22,894	21,538	19,920	21,888
14	Ohio State U.	33,426	33,704	29,977	26,820	9,445	9,478	12,399	9,208
15	Stanford U.	20,753	21,031	24,841	24,788	17,305	16,957	19,292	19,677
16	Columbia U. in the City of New York	17,659	21,261	17,385	24,548	14,428	16,822	16,276	19,528
17	U. North Carolina, Chapel Hill	17,093	14,607	22,587	23,145	12,824	12,191	13,557	14,062
18	U. Alabama, Huntsville	19,087	21,689	25,767	22,533	18,984	21,105	23,852	21,401
19	U. Wisconsin-Madison	21,985	22,368	22,366	21,284	15,653	16,899	16,298	15,147
20	Virginia Polytechnic Institute and State U.	12,776	12,914	19,897	21,151	5,532	5,356	10,588	10,766
21	Purdue U., West Lafayette	16,449	21,381	22,175	21,108	11,156	15,067	16,677	15,028
22	U. Chicago	51,948	31,354	19,676	20,217	49,498	30,256	18,462	17,571
23	Cornell U.	17,897	19,222	23,138	19,179	14,708	16,222	18,168	13,506
24	U. Washington, Seattle	4,980	9,830	15,774	18,988	1,723	4,525	11,819	14,170
25	U. Massachusetts, Amherst	18,066	18,798	18,661	18,447	12,140	12,617	12,797	13,028
26	U. Hawaii, Manoa	22,488	20,456	22,378	17,555	19,879	19,070	22,109	16,551
27	Rutgers, State U. New Jersey, New Brunswick	7,233	6,979	10,487	17,097	4,224	4,883	6,602	9,560
28	U. California, Los Angeles	15,624	16,333	17,795	15,970	10,568	10,572	11,154	9,745
29	U. Pennsylvania	14,891	16,562	18,373	15,453	12,784	14,660	16,089	13,804
30	U. Minnesota, Twin Cities	14,454	15,120	15,943	15,447	9,413	9,882	10,573	10,674
31	U. California, Irvine	13,725	14,278	14,687	13,891	8,614	9,052	8,980	7,064
32	SUNY, U. Buffalo	15,582	15,975	14,032	13,402	9,458	9,894	8,255	6,804
33	U. Central Florida	494	409	1,099	12,988	321	281	359	9,825
34	North Carolina State U.	9,495	11,073	12,031	12,695	7,822	8,568	8,945	10,256
35	Arizona State U.	10,324	10,269	10,539	12,516	7,019	6,880	7,542	8,366
36	U. California, Santa Barbara	9,409	13,479	10,060	12,473	6,065	5,680	6,986	7,085
37	New York U.	6,588	7,436	6,147	12,446	5,725	6,371	5,324	8,530
38	Michigan State U.	6,976	10,721	9,859	12,124	4,087	6,566	6,242	6,315

Appendix F. Total and Federally Financed Higher Education R&D Expenditures in the Computer Sciences for the Top 100 Institutions, ranked by FY 2014 Total: FYs 2011-14

(Dollars in thousands)

Rank	Institution	Total				Federally financed			
		2011	2012	2013	2014	2011	2012	2013	2014
39	George Mason U.	8,743	10,646	11,361	11,988	8,125	9,953	10,604	11,153
40	Princeton U.	10,632	12,263	14,774	11,856	7,817	9,320	8,028	8,041
41	Brown U.	11,552	11,327	11,641	11,845	4,956	5,316	4,910	4,229
42	U. Alabama, Tuscaloosa	5,918	8,889	10,692	11,756	3,514	3,655	5,153	5,854
43	Naval Postgraduate School	14,016	16,202	13,262	11,634	13,836	15,925	12,777	11,360
44	U. Louisiana, Lafayette	9,601	9,377	8,376	11,301	1,343	1,409	1,546	2,796
45	Florida International U.	6,611	7,240	8,111	10,975	4,282	4,218	4,414	6,645
46	U. Nebraska, Lincoln	7,110	8,145	5,264	10,559	4,825	4,141	3,107	5,165
47	U. Illinois, Chicago	9,495	10,953	12,027	10,533	6,919	7,198	7,721	6,281
48	Yale U.	6,290	6,432	13,443	9,508	4,103	5,414	6,194	6,578
49	U. Michigan, Ann Arbor	6,572	5,674	6,755	9,123	4,386	4,182	5,103	6,281
50	Rensselaer Polytechnic Institute	6,263	7,795	9,431	9,103	5,038	5,885	7,453	6,010
51	Clemson U.	3,773	5,098	8,288	8,879	1,708	2,599	5,134	5,466
52	Northeastern U.	4,170	7,394	8,380	8,708	3,658	6,248	7,096	7,792
53	Texas A&M U., College Station and Health Science Center	9,517	8,224	9,368	8,686	4,432	4,573	5,484	5,053
54	Rice U.	11,537	9,098	8,148	8,680	10,295	7,373	6,595	6,737
55	U. Arizona	10,267	9,227	9,664	8,587	8,252	8,439	8,248	7,094
56	U. Colorado Boulder	8,757	13,339	11,391	8,191	8,475	12,866	11,022	8,004
57	U. California, Davis	9,401	9,158	9,411	8,155	6,655	6,522	7,060	6,058
58	U. Texas, Dallas	6,597	6,681	8,334	7,719	4,143	4,444	5,071	5,224
59	U. Notre Dame	5,647	6,026	6,754	6,892	4,080	4,186	3,451	3,347
60	SUNY, Stony Brook U.	6,537	7,366	7,194	6,879	5,563	6,398	5,834	5,001
61	U. Pittsburgh, Pittsburgh	7,232	6,951	6,800	6,769	4,533	4,632	4,453	4,136
62	U. South Florida, Tampa	2,268	2,359	5,573	6,636	1,286	1,387	1,443	1,339
63	SUNY, U. Albany	3,539	5,182	5,949	6,624	2,094	3,948	4,586	5,090
64	U. Texas, El Paso	7,492	8,119	7,436	6,616	5,465	6,879	5,542	4,723
65	Oregon State U.	2,663	3,608	5,666	6,528	2,478	3,325	4,830	5,502
66	Drexel U.	2,826	3,275	5,713	6,480	2,196	2,406	4,643	4,882
67	U. Virginia, Charlottesville	6,949	7,815	6,872	6,461	5,165	6,475	5,723	5,150
68	U. Maryland, Baltimore County	5,790	6,728	6,483	6,328	4,728	5,738	5,354	5,593
69	Washington State U.	610	412	1,391	6,226	298	104	91	856
70	Rockefeller U.	6,060	6,361	6,211	6,211	0	0	0	0
71	Mississippi State U.	11,252	10,003	7,113	5,739	6,846	6,089	4,160	3,047
72	Florida State U.	7,309	5,670	6,548	5,727	5,551	3,773	3,497	3,796
73	George Washington U.	4,516	3,061	5,168	5,594	3,236	2,277	3,142	3,098
74	U. California, Berkeley	0	0	1,322	5,567	0	0	0	50
75	U. Delaware	7,461	5,991	5,619	5,542	5,981	4,845	4,485	4,492
76	U.S. Military Academy	897	2,422	623	5,312	897	2,422	623	5,312
77	U. North Carolina, Charlotte	5,231	6,053	5,407	5,253	3,620	5,315	4,880	4,746

Appendix F. Total and Federally Financed Higher Education R&D Expenditures in the Computer Sciences for the Top 100 Institutions, ranked by FY 2014 Total: FYs 2011-14

(Dollars in thousands)

Rank	Institution	Total				Federally financed			
		2011	2012	2013	2014	2011	2012	2013	2014
78	SUNY, Binghamton U.	3,632	5,185	4,833	5,199	1,236	1,647	1,652	1,562
79	New Jersey Institute of Technology	5,928	3,923	5,100	5,132	1,044	794	727	727
80	North Dakota State U.	2,842	2,620	3,996	5,106	2,392	2,043	1,915	2,768
81	Washington U., Saint Louis	5,069	4,980	4,659	5,047	3,095	4,362	4,039	4,034
82	U. California, Riverside	3,570	3,719	4,436	5,022	2,720	3,045	3,128	3,936
83	U. Houston	8,735	7,273	5,405	5,019	5,815	3,978	2,834	2,156
84	U. North Texas, Denton	2,427	3,101	3,210	5,002	1,172	1,341	1,855	2,816
85	U. Oregon	6,186	7,850	6,001	4,859	5,752	7,389	5,574	4,469
86	Syracuse U.	7,571	10,009	5,736	4,857	1,990	2,612	1,953	2,482
87	Wright State U.	4,549	4,336	4,585	4,803	1,749	1,483	1,729	2,067
88	Boston U.	3,318	3,884	5,111	4,655	3,022	3,361	4,237	3,702
89	Duke U.	5,530	5,214	5,188	4,639	4,688	4,365	4,261	4,107
90	Worcester Polytechnic Institute	2,600	3,231	3,664	4,605	2,252	2,377	2,987	4,014
91	Iowa State U.	7,453	6,717	7,083	4,485	3,900	3,475	4,141	1,908
92	Kansas State U.	2,662	3,796	4,170	4,442	2,049	2,983	2,636	2,869
93	U. Florida	6,395	6,442	5,921	4,426	4,932	4,858	4,014	3,632
94	U. New Mexico	3,159	3,810	4,354	4,410	2,802	3,528	4,215	3,469
95	Temple U.	3,061	3,443	3,422	4,355	2,405	2,363	2,411	3,311
96	U. Massachusetts, Lowell	2,212	3,327	4,118	4,313	1,341	1,890	2,139	2,528
97	Dartmouth C.	1,991	5,416	5,696	4,299	1,216	4,530	5,151	3,738
98	U. Texas, Arlington	3,996	3,968	3,919	4,241	2,017	2,315	1,921	1,462
99	U. Memphis	3,540	3,899	3,366	4,129	1,401	2,296	1,819	2,338
100	Colorado State U., Fort Collins	3,293	3,736	3,769	3,909	2,738	3,338	3,264	3,478

i = imputed. na = not applicable; institution did not exist or did not exist as a separate entity. ne = not eligible; institution did not meet the criteria for inclusion.

^a Johns Hopkins University includes Applied Physics Laboratory, with \$114,424 thousand in total and \$110,059 thousand in federally financed R&D expenditures in computer sciences in FY 2014.

NOTES: Institutions reporting zero expenditures in ranked total for FY 2014 are not listed in this table. Tied institutions are ranked alphabetically. Institutions ranked are geographically separate campuses headed by a campus-level president or chancellor. Some campuses are part of large multi-campus universities; some are part of state university systems. For a complete listing of campuses that belong to a larger university or system and their aggregate R&D expenditures, see table 84.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, Higher Education Research and Development Survey.

Appendix G. Total Higher Education R&D Expenditures in Engineering for the Top 150 Institutions, ranked by FY 2014 Total: FYs 2011-14

(Dollars in thousands)

Rank	Institution	Total				Federally financed			
		2011	2012	2013	2014	2011	2012	2013	2014
	All institutions	10,031,879	10,283,173	10,735,342	10,973,790	6,273,651	6,441,153	6,499,211	6,422,024
1	Johns Hopkins U. ^a	854,997	859,561	878,969	935,105	830,873	829,211	846,427	903,522
2	Georgia Institute of Technology	451,494	482,758	503,466	505,384	302,033	340,465	362,464	363,149
3	SUNY, Polytechnic Institute	na	na	na	408,504	na	na	na	18,364
4	Massachusetts Institute of Technology	305,042	365,199	420,307	403,208	198,101	213,564	224,582	214,215
5	Pennsylvania State U., University Park and Hershey Medical Center	276,101	298,811	320,195	302,833	177,791	225,724	246,100	223,559
6	Texas A&M U., College Station and Health Science Center	263,765	256,102	278,536	291,643	88,599	74,224	74,703	72,752
7	U. Michigan, Ann Arbor	205,299	221,066	244,187	251,302	135,430	148,532	169,484	174,530
8	Virginia Polytechnic Institute and State U.	194,811	188,918	214,485	228,570	88,672	78,757	88,451	93,842
9	U. Texas, Austin	204,701	198,293	206,033	206,531	113,904	114,906	119,326	121,270
10	Purdue U., West Lafayette	216,949	216,037	220,926	205,553	110,547	116,016	119,990	106,014
11	U. California, Berkeley	164,287	172,433	177,450	185,951	62,101	67,669	71,703	70,618
12	U. Illinois, Urbana-Champaign	147,255	147,498	165,186	172,828	96,520	100,554	103,806	105,600
13	Ohio State U.	166,439	149,341	155,507	152,592	68,593	69,704	69,963	69,839
14	North Carolina State U.	113,678	122,735	129,817	150,219	55,405	61,649	59,044	61,176
15	U. Wisconsin-Madison	116,207	113,742	139,011	147,612	72,393	73,039	82,463	96,970
16	Stanford U.	121,699	132,180	131,406	132,936	97,313	103,568	99,464	99,915
17	U. Washington, Seattle	107,059	104,196	121,890	128,996	83,851	81,480	94,004	97,986
18	U. California, San Diego	109,397	126,107	125,933	119,690	51,841	55,925	59,086	65,001
19	U. Maryland, College Park	116,928	117,243	120,139	111,172	74,266	72,273	74,909	68,007
20	Cornell U.	93,350	87,851	104,640	110,812	68,913	62,868	61,662	59,890
21	U. Minnesota, Twin Cities	97,401	90,993	100,375	106,416	57,486	53,044	53,524	55,884
22	Arizona State U.	93,124	100,402	101,727	105,490	52,230	49,015	46,594	47,620
23	U. Colorado Boulder	95,980	89,462	97,680	93,839	68,118	69,847	72,416	68,179
24	Iowa State U.	64,571	63,085	67,958	91,095	34,984	33,211	37,001	36,666
25	U. Rochester	86,748	99,098	98,369	90,231	74,168	84,455	83,030	76,444
26	Carnegie Mellon U.	93,453	89,532	94,157	89,909	74,610	72,719	72,720	69,149
27	U. California, Santa Barbara	89,709	100,297	99,090	88,828	54,834	59,155	57,603	50,259
28	Northwestern U.	81,524	80,250	81,955	87,075	59,306	56,016	56,278	57,273
29	Utah State U.	89,698	83,739	81,287	86,442	72,005	69,250	65,987	72,740
30	U. California, Davis	86,855	83,140	85,867	86,393	35,604	33,089	36,070	33,723
31	U. Florida	92,794	87,878	88,911	85,271	44,513	47,709	46,988	47,166
32	Princeton U.	80,360	84,468	78,258	84,868	50,471	52,495	47,900	50,626
33	SUNY, U. Buffalo	55,758	65,395	82,189	82,076	34,611	44,827	57,786	54,660
34	Woods Hole Oceanographic Institution	49,284	50,667	58,804	78,228	40,390	43,811	52,885	66,853
35	U. Dayton	85,822	76,796	77,587	78,165	67,566	62,269	62,946	59,665
36	Duke U.	56,074	58,592	72,195	76,918	44,849	50,404	62,722	67,173
37	U. Utah	71,940	83,904	80,255	74,732	38,193	45,931	35,184	29,317
38	U. California, Los Angeles	67,967	70,756	76,010	73,254	41,015	39,317	42,541	41,440
39	U. South Florida, Tampa	31,922	37,629	48,713	71,752	14,866	17,307	20,596	22,642
40	Rensselaer Polytechnic Institute	53,140	58,953	60,295	71,340	33,850	36,928	36,806	38,920
41	New Mexico State U.	70,707	69,350	77,303	70,449	57,002	57,362	61,255	55,834
42	U. Southern California	56,120	63,193	67,714	69,986	40,003	43,504	48,493	45,321
43	U. Notre Dame	48,584	56,709	63,663	65,682	32,630	30,414	30,456	32,007
44	U. Tennessee, Knoxville	60,202	62,903	65,343	64,557	38,752	38,245	41,851	37,964
45	Rutgers, State U. New Jersey, New Brunswick	59,489	61,123	59,611	64,537	38,350	42,820	40,326	40,049
46	Columbia U. in the City of New York	54,985	59,239	63,405	62,976	43,654	44,004	47,694	47,025
47	U. California, Santa Cruz	59,256	60,396	56,129	59,837	49,593	45,343	41,203	43,337

Appendix G. Total Higher Education R&D Expenditures in Engineering for the Top 150 Institutions, ranked by FY 2014 Total: FYs 2011-14

(Dollars in thousands)

Rank	Institution	Total				Federally financed			
		2011	2012	2013	2014	2011	2012	2013	2014
48	U. Virginia, Charlottesville	56,429	63,008	67,517	59,157	38,529	42,022	41,907	37,036
49	U. Delaware	54,544	54,374	58,592	57,086	43,427	43,828	47,336	43,851
50	Harvard U.	42,715	47,953	57,962	56,876	33,824	38,689	41,524	44,016
51	Clemson U.	61,229	54,513	51,795	56,334	29,049	27,896	24,699	23,948
52	Vanderbilt U.	48,458	55,490	59,890	56,207	39,458	44,503	47,496	47,373
53	Rice U.	41,850	48,379	48,869	54,805	27,208	31,814	30,319	31,406
54	U. Arizona	58,310	62,605	61,461	54,558	28,534	31,296	29,922	26,009
55	Case Western Reserve U.	40,150	44,720	48,079	54,453	29,615	31,325	35,396	32,987
56	U. Houston	33,700	45,791	46,701	53,091	19,852	21,831	22,559	25,047
57	California Institute of Technology	48,783	43,509	33,410	49,293	42,605	36,843	23,143	25,957
58	New Jersey Institute of Technology	47,561	50,675	50,652	48,997	29,988	32,828	31,352	30,327
59	Wichita State U.	45,662	44,294	47,026	48,330	11,269	10,489	6,189	5,796
60	U. Iowa	45,013	46,855	51,403	48,135	21,147	22,303	25,189	22,928
61	U. Pennsylvania	40,847	45,841	48,182	46,345	34,888	39,873	42,552	39,567
62	Auburn U., Auburn	50,021	45,370	51,672	46,263	25,716	24,304	26,383	21,770
63	Boston U.	40,823	39,638	43,319	46,103	34,185	33,025	31,794	31,358
64	U. Texas, Arlington	36,360	39,075	48,233	45,440	15,824	17,159	17,561	13,162
65	U. Kentucky	51,977	55,825	53,258	45,002	25,873	27,122	26,502	19,370
66	U. Massachusetts, Amherst	46,669	44,699	45,030	44,867	26,346	24,580	24,216	25,507
67	Brown U.	26,847	28,928	27,815	44,695	9,425	11,221	13,729	17,821
68	Michigan State U.	42,703	45,582	45,695	43,506	24,503	25,772	28,819	24,679
69	Florida State U.	40,203	41,684	42,108	43,246	31,315	33,293	32,424	33,994
70	U. Connecticut	30,332	38,052	39,224	43,185	19,494	25,741	24,567	20,550
71	Washington State U.	50,266	51,092	40,886	42,293	20,498	23,660	21,176	19,254
72	U. Alabama, Huntsville	31,955	40,340	49,258	41,665	30,459	36,999	43,465	36,592
73	Louisiana State U., Baton Rouge	35,658	37,163	38,041	41,378	10,193	11,245	12,566	12,768
74	Mississippi State U.	56,487	54,766	40,165	40,714	37,680	35,163	21,030	20,193
75	Colorado School of Mines	29,360	37,780	38,715	40,604	21,556	23,148	22,047	25,577
76	Northeastern U.	30,204	38,523	42,171	40,441	25,179	28,706	31,688	28,613
77	Drexel U.	45,376	46,895	42,032	40,248	32,865	34,391	29,096	28,761
78	U. Nebraska, Lincoln	42,328	39,596	41,693	40,055	23,398	19,897	19,477	16,674
79	U. North Dakota	42,191	45,141	37,548	39,871	28,971	29,060	24,187	20,078
80	Yale U.	34,089	33,010	33,012	39,856	20,566	25,732	25,456	25,960
81	U. Texas, Dallas	40,834	36,244	38,530	38,936	8,795	11,287	9,522	10,487
82	U. Cincinnati	39,357	39,668	37,388	38,667	16,828	16,508	15,173	11,027
83	West Virginia U.	40,903	41,488	37,058	38,572	25,971	24,176	21,103	19,870
84	Michigan Technological U.	40,510	40,891	39,860	38,504	20,270	20,117	18,612	17,196
85	U. California, Irvine	38,721	42,051	43,025	38,055	19,763	20,246	21,053	20,798
86	U. Akron	26,653	32,182	36,384	37,673	7,577	11,045	14,800	15,085
87	Oregon State U.	29,089	32,010	35,384	37,174	19,575	22,746	24,586	25,696
88	U. Pittsburgh, Pittsburgh	33,013	31,167	36,867	36,179	23,820	22,961	25,280	23,238
89	Colorado State U., Fort Collins	35,387	36,821	37,058	35,925	23,830	25,457	24,358	20,228
90	Texas Tech U.	35,288	29,783	31,909	34,890	11,954	9,130	9,247	10,738
91	U. New Mexico	32,313	33,275	37,010	34,447	26,079	26,265	27,981	25,273
92	U. Central Florida	30,481	33,787	37,519	34,383	19,456	21,329	21,104	13,736
93	U. South Carolina, Columbia	71,684	37,565	33,757	34,131	23,448	19,625	15,496	15,516
94	New Mexico Institute of Mining and Technology	15,313	14,091	16,649	33,539	13,217	11,507	12,928	25,521
95	U. Missouri, Columbia	18,836	37,824	34,769	33,116	17,635	17,112	13,156	9,811
96	U.S. Air Force Academy	61,081	25,637	37,998	31,488	55,151	24,357	36,561	27,333

Appendix G. Total Higher Education R&D Expenditures in Engineering for the Top 150 Institutions, ranked by FY 2014 Total: FYs 2011-14

(Dollars in thousands)

Rank	Institution	Total				Federally financed			
		2011	2012	2013	2014	2011	2012	2013	2014
97	Naval Postgraduate School	18,009	22,397	21,627	30,403	16,663	20,442	20,667	29,950
98	Missouri U. of Science and Technology	29,389	26,544	27,560	29,980	22,670	18,837	19,455	15,908
99	Ohio U.	19,596	19,526	19,488	28,670	8,775	7,406	7,445	7,803
100	Florida International U.	23,090	18,913	20,018	27,098	13,418	11,221	11,215	16,056
101	CUNY, City C.	28,777	29,415	26,356	26,856	17,455	18,911	18,146	20,990
102	U. Alaska, Fairbanks	10,014	14,806	15,848	26,774	6,893	10,894	9,670	5,778
103	Wright State U.	13,015	14,831	21,804	26,572	8,170	8,401	10,689	13,044
104	Kansas State U.	24,365	23,918	26,233	25,546	13,695	11,968	11,362	9,563
105	U. Oklahoma, Norman and Health Science Center	27,403	29,402	26,730	25,506	8,896	15,826	13,877	7,741
106	U. Maine	37,260	25,040	19,397	25,392	22,364	9,742	9,333	11,536
107	U. Louisville	27,690	23,867	23,550	24,567	14,835	11,340	10,054	9,512
108	Oklahoma State U., Stillwater	58,528	60,575	25,511	24,235	47,375	50,560	13,445	11,104
109	Mercer U.	22,012	24,694	22,737	24,163	15,402	17,669	17,307	17,870
110	U. New Hampshire	22,847	43,067	37,183	24,010	12,811	29,426	22,984	11,805
111	U. Arkansas, Fayetteville	24,357	27,388	26,269	23,967	11,515	11,216	9,997	6,635
112	Stevens Institute of Technology	35,317	25,764	22,465	23,870	28,334	22,872	19,541	18,385
113	Old Dominion U.	32,825	30,218	32,209	23,575	15,111	13,182	13,214	12,876
114	U. California, Riverside	23,473	25,931	24,754	22,852	14,717	12,794	12,320	8,450
115	U. Texas, El Paso	22,787	26,108	24,015	22,719	8,943	11,227	9,566	9,676
116	Wayne State U.	21,768	19,128	20,292	21,524	10,407	10,564	9,752	11,019
117	U. Illinois, Chicago	18,839	19,896	19,144	21,161	11,762	10,897	9,434	9,791
118	Washington U., Saint Louis	19,914	20,122	19,340	20,673	14,282	15,020	12,749	13,798
119	SUNY, Binghamton U.	25,503	24,257	22,316	20,363	6,613	5,259	4,066	3,700
120	Tufts U.	16,328	17,825	20,105	20,301	13,449	13,384	16,236	15,882
121	U. Tulsa	11,814	13,429	15,205	20,261	1,948	1,511	1,390	1,266
122	Lehigh U.	18,118	18,565	18,529	19,956	11,407	12,418	11,902	11,471
123	Cleveland State U.	11,377	17,354	16,568	19,717	5,908	9,701	7,805	7,741
124	SUNY, Stony Brook U.	20,384	22,748	21,676	19,679	10,610	13,466	13,926	11,910
125	U. Kansas	15,995	17,107	17,796	19,632	8,237	8,619	10,002	10,982
126	Montana State U., Bozeman	23,400	21,646	20,062	19,519	14,696	12,260	10,700	11,202
127	Dartmouth C.	22,215	21,980	21,751	17,989	11,990	14,531	14,632	12,969
128	U. Alabama, Birmingham	17,556	19,363	21,186	17,847	13,046	15,270	16,828	13,732
129	U. Toledo	15,886	14,532	16,304	17,699	8,113	6,618	7,074	7,100
130	Worcester Polytechnic Institute	12,699	10,058	15,041	17,360	8,175	6,158	10,407	11,021
131	U. Hawaii, Manoa	8,028	7,873	11,245	17,127	3,932	4,508	8,403	14,584
132	U. Alabama, Tuscaloosa	25,479	21,755	18,597	15,372	14,511	15,477	11,127	8,398
133	Syracuse U.	16,531	16,785	15,865	14,943	6,327	6,750	6,827	5,999
134	U. Idaho	16,864	15,248	15,707	14,528	11,428	9,499	9,104	8,021
135	Illinois Institute of Technology	22,198	16,703	18,080	13,899	17,090	14,047	12,001	10,462
136	Brigham Young U., Provo	12,001	10,630	13,590	13,861	7,385	6,718	8,227	8,700
137	George Washington U.	12,852	16,211	15,531	13,807	7,171	7,977	9,345	7,043
138	U. Massachusetts, Lowell	18,295	18,073	15,236	13,540	6,298	7,149	6,728	4,740
139	Embry-Riddle Aeronautical U.	9,567	12,989	10,143	12,816	8,381	11,243	8,795	11,315
140	U. North Texas, Denton	7,510	10,560	14,488	12,792	2,687	4,675	5,279	5,068
141	North Carolina Agricultural and Technical State U.	12,666	12,130	12,348	12,347	9,887	9,631	9,612	10,557
142	Air Force Institute of Technology	16,167	16,073	12,194	12,309	9,748	8,228	6,878	7,237
143	North Dakota State U.	17,550	11,762	14,564	12,114	12,082	5,581	3,744	2,168
144	Rochester Institute of Technology	14,854	13,265	14,548	11,938	8,974	7,140	6,475	5,751
145	U. Nevada, Reno	16,184	14,176	12,682	11,789	12,211	10,544	9,084	8,418

Appendix G. Total Higher Education R&D Expenditures in Engineering for the Top 150 Institutions, ranked by FY 2014 Total: FYs 2011-14

(Dollars in thousands)

Rank	Institution	Total				Federally financed			
		2011	2012	2013	2014	2011	2012	2013	2014
146	New York U.	0	0	3,332	11,078	0	0	0	4,188
147	Southern Illinois U., Carbondale	9,698	9,118	11,069	10,858	1,641	980	891	1,029
148	U. Wisconsin-Milwaukee	13,692	12,588	11,291	10,696	4,950	4,488	3,897	4,057
149	U. Nevada, Las Vegas	5,991	5,176	5,627	10,586	5,202	4,179	3,921	6,965
150	Portland State U.	7,748	8,077	8,488	10,544	5,164	5,486	4,909	6,659

i = imputed. na = not applicable; institution did not exist or did not exist as a separate entity. ne = not eligible; institution did not meet the criteria for inclusion.

^a Johns Hopkins University includes Applied Physics Laboratory, with \$862,824 thousand in total and \$840,161 thousand in federally financed R&D expenditures in engineering in FY 2014.

NOTES: Institutions reporting zero expenditures in ranked total for FY 2014 are not listed in this table. Tied institutions are ranked alphabetically. Institutions ranked are geographically separate campuses headed by a campus-level president or chancellor. Some campuses are part of large multi-campus universities; some are part of state university systems. For a complete listing of campuses that belong to a larger university or system and their aggregate R&D expenditures, see table 84.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, Higher Education Research and Development Survey.

Appendix H. Higher Education R&D Expenditures in Environmental Sciences for the Top 100 Institutions, ranked by FY 2014 Total

(Dollars in thousands)

Rank	Institution	2014				
		All environmental sciences	Atmospheric sciences	Earth sciences	Oceanography	Environmental sciences, nec
	All institutions	3,248,721	500,950	1,158,537	1,071,595	517,639
1	U. California, San Diego	181,434	21,360	40,847	119,227	0
2	Woods Hole Oceanographic Institution	141,788	0	0	141,788	0
	Texas A&M U., College Station and Health Science Center					
3		123,796	5,482	12,642	94,531	11,141
4	Columbia U. in the City of New York	115,826	21,719	30,929	35,650	27,528
5	U. Washington, Seattle	112,403	45,404	8,468	57,291	1,240
6	Colorado State U., Fort Collins	107,032	38,745	68,002	0	285
7	U. Colorado Boulder	96,539	31,858	49,737	521	14,423
8	U. Hawaii, Manoa	85,355	4,733	20,965	55,466	4,191
9	U. Alaska, Fairbanks	75,267	7,128	25,880	35,132	7,127
10	U. Texas, Austin	68,589	8	57,807	9,478	1,296
11	U. Miami	64,103	50,518	196	11,332	2,057
12	Rutgers, State U. New Jersey, New Brunswick	59,916	2,980	579	17,190	39,167
	Pennsylvania State U., University Park and Hershey Medical Center					
13		59,370	23,707	28,253	7,410	0
14	U. New Hampshire	58,766	24,711	14,742	19,313	0
15	Massachusetts Institute of Technology	56,763	10,158	20,072	7,182	19,351
	U. Maryland, Center for Environmental Science					
16		50,814	0	4,243	46,571	0
17	U. Wisconsin-Madison	48,810	28,857	7,663	3,861	8,429
18	Oregon State U.	46,468	4,060	6,950	22,005	13,453
	U. Oklahoma, Norman and Health Science Center					
19		39,406	28,490	10,916	0	0
20	U. Maryland, College Park	38,810	1,795	37,015	0	0
21	U. Rhode Island	38,351	164	8,050	26,862	3,275
22	Arizona State U.	37,327	0	37,327	0	0
23	Johns Hopkins U. ^a	34,553i	2,755i	9,025i	4,876i	17,897i
24	Harvard U.	34,293	434	10,139	15	23,705
25	Stanford U.	33,919	0	13,268	5,013	15,638
26	U. North Carolina, Chapel Hill	33,132	0	20,331	10,498	2,303
27	Louisiana State U., Baton Rouge	31,609	0	4,211	21,210	6,188
28	U. Arizona	30,922	2,773	18,593	0	9,556
	C. of William and Mary and Virginia Institute of Marine Science					
29		28,281	0	556	26,197	1,528
30	SUNY, Stony Brook U.	27,205	1,286	5,828	19,916	175
31	U. California, Davis	27,059	1,169	4,320	3,513	18,057
32	North Carolina State U.	25,951	9,785	0	4,001	12,165
33	U. California, Santa Barbara	25,009	0	9,035	15,091	883
34	U. California, Los Angeles	24,320	5,380	13,446	0	5,494

Appendix H. Higher Education R&D Expenditures in Environmental Sciences for the Top 100 Institutions, ranked by FY 2014 Total

(Dollars in thousands)

Rank	Institution	2014				
		All environmental sciences	Atmospheric sciences	Earth sciences	Oceanography	Environmental sciences, nec
35	Cornell U.	23,759	0	8,373	268	15,118
36	Florida State U.	23,480	5,575	2,667	13,791	1,447
37	U. California, Santa Cruz	23,449	0	5,667	11,582	6,200
38	California Institute of Technology	23,269	0	20,756	0	2,513
39	Desert Research Institute	21,929	5,894	16,035	0	0
40	U. Southern Mississippi	21,394	120	418	16,650	4,206
41	Princeton U.	20,498	6,474	8,338	0	5,686
42	U. Maine	20,343	0	6,557	13,772	14
43	U. Delaware	18,760	0	2,245	12,655	3,860
44	U. South Florida, Tampa	18,648	0	3,151	15,497	0
45	Duke U.	18,387	0	2,435	6,038	9,914
46	U. Kansas	17,947	949	16,755	243	0
47	U. Wyoming	17,898	4,693	2,485	0	10,720
48	U. Georgia	17,422	0	3,691	13,731	0
49	U. Michigan, Ann Arbor	17,279	0	17,279	0	0
50	U. Southern California	16,203	0	12,069	4,134	0
51	Georgia Institute of Technology	16,168	7,468	192	0	8,508
52	Michigan Technological U.	16,000	3,142	444	2,026	10,388
53	U. Minnesota, Duluth	15,724	0	583	2,362	12,779
54	U. Florida	15,170	0	8,862	5,880	428
55	U. Minnesota, Twin Cities	15,088	0	13,069	0	2,019
56	U. Maryland, Baltimore County	14,716	0	14,716	0	0
57	San Jose State U.	14,006	516	416	13,022	52
58	Texas A&M U.-Corpus Christi	13,782	237	1,780	9,008	2,757
59	U. Nevada, Reno	13,199	1,056	9,372	550	2,221
60	Texas Tech U.	12,924	212	3,955	0	8,757
61	U. Utah	12,302	4,239	8,063	0	0
62	U. Pittsburgh, Pittsburgh	11,831	0	3,112	0	8,719
63	Montana State U., Bozeman	11,591	0	1,252	0	10,339
64	Ohio State U.	11,517	0	11,517	0	0
65	Southern Methodist U.	11,432	0	11,432	0	0
66	U. Alabama, Huntsville	11,382	11,198	179	0	5
67	U. Wisconsin-Milwaukee	11,247	2,730	1,061	5,670	1,786
68	Colorado School of Mines	11,081	0	11,081	0	0
69	U. California, Irvine	10,995	219	0	0	10,776
70	Naval Postgraduate School	10,692	5,607	71	4,587	427
71	Technology	10,296	0	10,047	0	249
72	U. California, Berkeley	9,951	28	9,923	0	0
73	George Mason U.	9,770	3,752	5,950	68	0

Appendix H. Higher Education R&D Expenditures in Environmental Sciences for the Top 100 Institutions, ranked by FY 2014 Total

(Dollars in thousands)

Rank	Institution	2014				
		All environmental sciences	Atmospheric sciences	Earth sciences	Oceanography	Environmental sciences, nec
74	U. Connecticut	9,488	0	35	9,453	0
75	Washington U., Saint Louis	9,376	0	6,493	0	2,883
76	U. California, Riverside	9,147	50	4,084	0	5,013
77	U. Central Florida	9,132	8,849	0	0	283
78	West Virginia U.	9,015	0	7,254	0	1,761
79	U. Massachusetts, Dartmouth	8,812	0	0	8,812	0
80	Brown U.	8,801	412	5,560	1,241	1,588
81	U. Mississippi and U. Mississippi, Jackson, Medical Center	8,687	0	95	8,592	0
82	U. North Dakota	8,648	5,562	2,736	0	350
83	U. Nevada, Las Vegas	8,504	0	6,187	0	2,317
84	U. Illinois, Urbana-Champaign	8,446	3,633	4,813	0	0
85	U. Chicago	8,295	0	8,295	0	0
86	Oregon Health and Science U.	8,194	0	0	0	8,194
87	U. Houston	8,039	0	8,039	0	0
88	Northern Arizona U.	7,773	132	5,858	32	1,751
89	Washington State U.	7,557	582	3,916	15	3,044
90	Virginia Polytechnic Institute and State U.	7,515	56	7,459	0	0
91	U. South Carolina, Columbia	7,394	0	7,386	8	0
92	Boston U.	6,984	0	5,644	0	1,340
93	SUNY, U. Albany	6,872	3,894	0	0	2,978
94	Boston C.	6,817	6,219	598	0	0
95	Montana Tech of U. Montana	6,794	0	6,794	0	0
96	U. Tennessee, Knoxville	6,711	0	2,789	0	3,922
97	Portland State U.	6,603	0	821	0	5,782
98	Old Dominion U.	6,306	0	0	6,306	0
99	Yale U.	6,117	0	6,020	0	97
100	San Francisco State U.	6,060	54	844	4,810	352

i = imputed. ne = not eligible; institution did not meet the criteria for inclusion.

nec = not elsewhere classified.

^a Johns Hopkins University includes Applied Physics Laboratory, with \$15,365 thousand in total R&D expenditures in environmental sciences in FY 2014.

NOTES: Institutions reporting zero expenditures in ranked total for FY 2014 are not listed in this table. Tied institutions are ranked alphabetically. Institutions ranked are geographically separate campuses headed by a campus-level president or chancellor. Some campuses are part of large multi-campus universities; some are part of state university systems. For a complete listing of campuses that belong to a larger university or system and their aggregate R&D expenditures, see table 84.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, Higher Education Research and Development Survey.

Appendix I. Higher Education R&D Expenditures in Life Sciences for the Top 100 Institutions, ranked by FY 2014 Total

(Dollars in thousands)

Rank	Institution	2014				
		All life sciences	Agricultural sciences	Biological sciences	Medical sciences	Life sciences, nec
	All institutions	37,921,244	3,373,268	11,703,597	20,686,408	2,157,971
1	U. California, San Francisco	1,052,759	0	42,509	1,010,250	0
2	Duke U.	867,513	0	223,392	614,876	29,245
3	Johns Hopkins U. ^a	862,584	0	234,290	567,149	61,145
4	U. Michigan, Ann Arbor	760,324	15,454	192,013	463,576	89,281
5	U. Washington, Seattle	757,278	25,930	184,612	498,318	48,418
6	U. Texas M. D. Anderson Cancer Center	738,247	0	309,169	429,078	0
7	U. Pittsburgh, Pittsburgh	722,739	0	160,023	523,245	39,471
8	U. North Carolina, Chapel Hill	714,830	0	238,994	355,403	120,433
9	U. California, Los Angeles	674,218	0	26,926	647,292	0
10	U. Pennsylvania	655,541	202	204,651	440,513	10,175
11	Yale U.	640,173	7,873	171,674	456,838	3,788
12	U. Wisconsin-Madison	626,184	55,720	181,024	381,954	7,486
13	U. California, San Diego	601,452	0	36,257	565,191	4
14	U. Minnesota, Twin Cities	595,108	84,973	108,277	397,011	4,847
15	Stanford U.	591,034	0	221,633	356,908	12,493
16	Washington U., Saint Louis	585,686	0	183,013	388,876	13,797
17	Columbia U. in the City of New York	585,344	0	139,229	332,248	113,867
18	Cornell U.	556,396	114,086	120,858	312,033	9,419
19	Vanderbilt U.	550,123	0	145,806	367,397	36,920
20	Harvard U.	527,625	0	361,784	151,194	14,647
21	Emory U.	513,635	0	187,546	314,003	12,086
22	U. California, Davis	509,743	133,761	150,801	225,181	0
23	U. Florida	500,622	161,102	124,550	172,432	42,538
24	Baylor C. of Medicine	496,314	0	259,527	236,787	0
25	Ohio State U.	472,312	65,958	66,147	324,728	15,479
26	Icahn School of Medicine at Mt. Sinai	463,429	0	235,642	227,787	0
27	Northwestern U.	436,439	0	95,577	320,206	20,656
28	U. Texas Southwestern Medical Center	434,627	0	185,672	237,830	11,125
29	U. Southern California	405,733	0	39,078	351,234	15,421
30	New York U.	404,592	0	140,418	225,065	39,109
31	U. Alabama, Birmingham	396,805	0	103,498	282,484	10,823
32	Scripps Research Institute	386,231	0	386,231	0	0
33	U. Colorado Denver and Anschutz Medical Campus	383,854	0	44,434	339,253	167
34	U. Maryland Baltimore	381,994	0	124,909	242,412	14,673
35	Rutgers, State U. New Jersey, New Brunswick	350,330	23,406	61,931	189,486	75,507
36	Case Western Reserve U.	341,879	0	69,752	251,875	20,252
37	U. Cincinnati	340,523	0	56,953	269,265	14,305
38	U. Iowa	339,591	0	92,446	226,085	21,060
39	U. Utah	321,624	0	56,591	179,223	85,810

Appendix I. Higher Education R&D Expenditures in Life Sciences for the Top 100 Institutions, ranked by FY 2014 Total

(Dollars in thousands)

Rank	Institution	2014				
		All life sciences	Agricultural sciences	Biological sciences	Medical sciences	Life sciences, nec
40	Texas A&M U., College Station and Health Science Center	319,265	177,751	38,013	103,463	38
41	Yeshiva U.	306,560	0	0	306,560	0
42	Rockefeller U.	299,828	0	286,882	12,946	0
43	U. South Florida, Tampa	290,276	0	50,824	198,961	40,491
44	Oregon Health and Science U.	286,399	0	134,916	145,588	5,895
45	Indiana U.-Purdue U., Indianapolis	283,120	0	57,625	216,957	8,538
46	U. Arizona	277,225	56,211	86,357	124,734	9,923
47	Uniformed Services U. of the Health Sciences	262,204	0	90,440	171,764	0
48	U. Chicago	256,612	0	86,487	162,826	7,299
49	U. Miami	253,589	0	38,632	204,162	10,795
50	Michigan State U.	251,495	95,868	101,260	42,834	11,533
51	U. Illinois, Chicago	250,528	0	60,009	175,814	14,705
52	Pennsylvania State U., University Park and Hershey Medical Center	250,304	87,278	58,382	104,644	0
53	SUNY, U. Buffalo	243,710	0	63,526	173,063	7,121
54	Medical U. South Carolina	242,594	0	75,014	103,722	63,858
55	Boston U.	242,286	0	61,289	172,198	8,799
56	U. Massachusetts, Medical School	241,869	0	80,169	107,810	53,890
57	U. Texas Health Science Center, Houston	233,737	0	43,761	92,274	97,702
58	U. Kentucky	231,222	52,445	60,047	112,965	5,765
59	U. Virginia, Charlottesville	224,411	0	60,672	157,094	6,645
60	U. Rochester	223,772	0	45,596	172,511	5,665
61	U. Georgia	219,233	77,555	113,734	24,384	3,560
62	Virginia Polytechnic Institute and State U.	211,993	103,451	68,047	36,819	3,676
63	U. Illinois, Urbana-Champaign	208,635	125,465	65,387	14,935	2,848
64	Purdue U., West Lafayette	206,776	115,088	39,263	39,251	13,174
65	U. California, Berkeley	206,587	60,630	73,332	72,625	0
66	U. California, Irvine	201,874	0	81,482	120,392	0
67	Medical C. Wisconsin	199,713	0	51,783	147,930	0
68	North Carolina State U.	189,274	81,675	80,310	9	27,280
69	U. Kansas	187,458	2,106	72,547	96,355	16,450
70	Washington State U.	182,940	92,529	66,402	14,243	9,766
71	U. Missouri, Columbia	175,893	77,354	17,499	63,390	17,650
72	U. Texas Medical Branch	173,168	0	112,140	61,028	0
73	U. Texas Health Science Center, San Antonio	172,716	0	57,290	106,592	8,834
74	Wake Forest U.	172,224	0	1,222	169,136	1,866
75	Temple U.	167,584	547	20,226	92,573	54,238
76	Wayne State U.	158,857	0	25,866	124,864	8,127
77	Louisiana State U., Baton Rouge	158,545	72,242	82,220	3,742	341
78	George Washington U.	154,797	111	21,420	97,980	35,286

Appendix I. Higher Education R&D Expenditures in Life Sciences for the Top 100 Institutions, ranked by FY 2014 Total

(Dollars in thousands)

Rank	Institution	2014				
		All life sciences	Agricultural sciences	Biological sciences	Medical sciences	Life sciences, nec
79	Virginia Commonwealth U.	151,340	0	47,807	85,098	18,435
80	Iowa State U.	148,924	56,106	62,223	21,524	9,071
81	U. Connecticut	146,296	6,949	78,795	56,995	3,557
82	Dartmouth C.	143,586	0	66,802	74,669	2,115
83	Brown U.	140,662	0	43,137	62,588	34,937
84	U. Nebraska, Medical Center	139,126	0	65,380	73,201	545
85	U. Oklahoma, Norman and Health Science Center	137,027	0	44,849	85,734	6,444
86	Georgetown U.	134,183	0	10,014	119,679	4,490
87	U. Louisville	132,260	60	41,033	79,096	12,071
88	U. New Mexico	131,719	0	31,355	93,784	6,580
89	U. Arkansas for Medical Sciences	131,438	0	34,007	90,229	7,202
90	U. Nebraska, Lincoln	130,234	73,704	52,483	593	3,454
91	Tulane U.	129,828	0	28,066	35,586	66,176
92	Colorado State U., Fort Collins	126,224	36,271	35,960	53,263	730
93	U. Hawaii, Manoa	123,273	26,336	11,802	75,984	9,151
94	Kansas State U.	121,162	74,016	45,657	1,489	0
95	Thomas Jefferson U.	118,378	0	54,449	59,818	4,111
96	Massachusetts Institute of Technology	117,231	88	74,537	21,303	21,303
97	Oregon State U.	116,353	70,334	42,197	2,039	1,783
98	Mississippi State U.	107,722	99,002	6,110	1,284	1,326
99	Tufts U.	106,310	0	77,389	28,921	0
100	U. South Carolina, Columbia	106,051	4,612	35,346	59,450	6,643

i = imputed. na = not applicable; institution did not exist or did not exist as a separate entity. ne = not eligible; institution did not meet the criteria for inclusion.

nec = not elsewhere classified.

^a Johns Hopkins University includes Applied Physics Laboratory, with \$26,091 thousand in total R&D expenditures in life sciences in FY 2014.

NOTES: Institutions reporting zero expenditures in ranked total for FY 2014 are not listed in this table. Tied institutions are ranked alphabetically. Institutions ranked are geographically separate campuses headed by a campus-level president or chancellor. Some campuses are part of large multi-campus universities; some are part of state university systems. For a complete listing of campuses that belong to a larger university or system and their aggregate R&D expenditures, see table 84.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, Higher Education Research and Development Survey.

Appendix J. Total and Federally Financed Higher Education R&D Expenditures in Mathematical Sciences for the Top 100 Institutions, ranked by FY 2014 Total: FYs 2011-14

(Dollars in thousands)

Rank	Institution	Total				Federally financed			
		2011	2012	2013	2014	2011	2012	2013	2014
	All institutions	640,300	674,209	670,773	657,578	458,931	490,417	464,496	441,199
1	Johns Hopkins U. ^a	32,764	40,467i	41,136i	45,757i	30,318	39,022	39,480	44,199
2	Brown U.	13,059	14,599	16,462	22,174i	9,243	9,765	10,520	11,749
3	North Carolina State U.	18,202	20,846	22,207	20,883	10,548	11,843	13,197	11,519
4	U. Texas M. D. Anderson Cancer Center	20,185	21,258	16,068	16,965	5,999	5,985	5,229	5,141
5	Rutgers, State U. New Jersey, New Brunswick	17,011	17,184	19,357	16,699	11,993	12,582	13,058	11,017
6	U. Michigan, Ann Arbor	14,148	14,142	15,680	16,485	7,484	7,030	6,944	6,930
7	Duke U.	9,581	10,532	12,199	12,791	7,067	9,026	10,972	11,671
8	U. Minnesota, Twin Cities	11,130	10,469	12,295	12,632	8,338	7,772	8,991	9,355
9	Iowa State U.	11,083	11,736	11,268	12,519	4,220	5,639	4,893	5,506
10	Texas A&M U., College Station and Health Science Center	11,719	12,378	13,023	12,333	5,586	6,274	6,329	5,835
11	Pennsylvania State U., University Park and Hershey Medical Center	11,732	12,042	11,930	10,880	8,815	9,570	9,385	8,068
12	Harvard U.	6,687	9,573	10,988	10,784	6,570	9,185	9,266	8,353
13	Princeton U.	9,295	11,695	11,788	10,764	7,040	8,742	8,328	7,971
14	U. California, Los Angeles	8,308	8,640	11,506	10,360	6,831	7,381	8,972	9,016
15	U. Texas, Austin	19,814	19,058	17,470	10,069	12,808	11,508	9,602	4,852
16	New York U.	11,077	10,001	11,056	10,062	10,643	9,475	10,005	8,858
17	California Institute of Technology	812	984i	9150i	9,338	812	9,227	8,429	8,051
18	Michigan State U.	5,000	6,540	10,413	9,206	3,827	4,823	6,385	5,506
19	Massachusetts Institute of Technology	8,293	8,883	9,329	8,679	7,725	7,374	7,436	6,657
20	Stanford U.	10,170	9,525	10,152	8,179	7,890	8,687	9,181	7,015
21	Ohio State U.	7,654	8,826	8,888	7,826	6,604	7,575	7,753	6,760
22	U. North Carolina, Chapel Hill	5,176	4,846	6,212	7,642	4,511	4,214	5,355	6,452
23	Rice U.	6,272	5,873	7,799	7,598	4,634	4,435	4,727	4,774
24	U. California, Berkeley	6,435	6,139	7,495	7,334	5,576	5,247	6,009	5,332
25	Purdue U., West Lafayette	6,862	7,349	8,136	7,179	4,923	5,129	5,380	4,351
26	Georgia Institute of Technology	8,110	6,876	6,482	6,958	2,876	3,007	2,710	2,388
27	U. Washington, Seattle	29,706	34,632	6,027	6,452	27,972	33,271	5,380	5,707
28	SUNY, Stony Brook U.	8,186	9,242	8,510	6,373	4,417	4,332	3,471	3,121
29	Carnegie Mellon U.	3,132	4,581	6,142	6,269	2,936	3,884	5,365	5,026
30	U. Wisconsin-Madison	6,359	6,942	6,776	6,251	4,440	5,393	4,600	4,419
31	U. Maryland, College Park	7,208	7,218	7,632	5,876	5,977	5,814	5,881	4,266
32	U. Utah	4,031	3,691	5,633	5,816	3,242	2,906	3,792	3,824
33	U. Nebraska, Lincoln	5,086	8,139	5,753	5,634	1,931	4,576	2,197	2,060
34	U. Georgia	5,334	5,078	5,525	5,437	1,773	1,347	1,567	1,307
35	U. Chicago	3,578	4,575	4,335	5,243	3,086	3,713	3,898	4,601
36	Arizona State U.	4,162	4,921	4,893	5,211	3,243	3,782	3,797	3,582
37	U. California, San Diego	4,594	4,450	5,100	5,200	3,763	3,380	4,138	4,287
38	U. California, Irvine	3,837	4,466	4,651	5,084	3,006	3,657	3,643	4,058

Appendix J. Total and Federally Financed Higher Education R&D Expenditures in Mathematical Sciences for the Top 100 Institutions, ranked by FY 2014 Total: FYs 2011-14

(Dollars in thousands)

Rank	Institution	Total				Federally financed			
		2011	2012	2013	2014	2011	2012	2013	2014
39	Texas Tech U.	4,414	4,588	4,664	4,828	2,096	1,977	1,694	1,504
40	Florida State U.	5,875	5,221	3,325	4,604	3,955	3,554	1,850	3,300
41	U. South Carolina, Columbia	2,541	2,734	4,572	4,557	2,528	1,826	4,037	4,042
42	New Jersey Institute of Technology	4,499	4,098	4,790	4,245	2,303	2,122	2,201	1,716
43	Naval Postgraduate School	7,196	7,725	4,385	4,227	6,894	7,554	3,736	3,607
44	U. Central Florida	448	488	579	4,215	322	357	457	718
45	U. Illinois, Urbana-Champaign	3,533	3,881	4,174	4,205	3,121	3,203	3,241	2,998
46	U. Arizona	2,901	4,006	6,003	4,124	2,180	2,440	2,299	1,570
47	U. Southern California	3,079	3,585	4,159	3,891	2,325	3,052	3,375	3,089
48	U. California, Davis	3,814	3,704	4,355	3,805	2,831	2,932	3,315	2,860
49	U. Pittsburgh, Pittsburgh	4,123	3,886	4,484	3,698	2,475	2,782	3,175	2,503
50	Yale U.	3,484	2,653	3,123	3,695	2,215	2,173	2,266	2,709
51	Colorado State U., Fort Collins	2,492	3,207	3,681	3,632	2,114	2,631	2,906	2,895
52	Virginia Polytechnic Institute and State U.	3,833	3,358	3,681	3,612	1,849	1,563	1,879	1,824
53	Columbia U. in the City of New York	5,715	5,022	3,792	3,426	5,139	4,399	2,666	2,521
54	Cornell U.	4,857	3,727	4,145	3,352	4,159	3,335	2,958	2,466
55	Oklahoma State U., Stillwater	2,402	2,429	2,309	3,128	150	209	186	256
56	U. Illinois, Chicago	2,822	2,854	3,565	3,100	2,146	2,203	2,644	2,294
57	Air Force Institute of Technology	3,922	4,739	5,225	3,088	2,863	3,586	4,415	2,499
58	Tufts U.	682	1,895	2,669	3,022	577	1,832	2,490	2,761
59	Boston U.	3,836	3,378	4,342	2,962	3,296	2,957	3,396	2,384
60	San Diego State U.	3,851	3,329	2,313	2,940	2,133	1,694	1,035	928
61	U. Notre Dame	2,151	2,320	3,180	2,924	1,778	1,686	1,970	1,763
62	Clemson U.	3,434	1,853	2,438	2,848	743	834	746	747
63	Indiana U., Bloomington	2,682	2,373	2,557	2,829	1,786	1,497	1,652	1,544
64	U. Pennsylvania	3,629	3,337	3,617	2,806	3,311	3,042	3,349	2,616
65	American U.	800	844	1,088	2,711	132	148	270	210
66	Emory U.	186i	1,706	2,363	2663i	0	1,487	1,949	1,883
67	U. Missouri, Columbia	1,760	2,003	2,320	2,434	1,677	1,911	2,232	2,230
68	California State U., San Bernardino	1,457	2,161	2,519	2,367	1,071	1,854	1,875	2,048
69	U. Houston	1,829	2,003	2,158	2,338	1,085	1,124	1,556	1,779
70	San Francisco State U.	1,449	1,833	1,886	2,287	1,342	1,263	1,413	1,734
71	Washington State U.	1,317	1,448	1,630	2,194	990	1,116	1,157	1,369
72	Northwestern U.	2,802	2,849	2,648	2,096	2,180	2,157	1,729	1,503
73	SUNY, Binghamton U.	1,861	2,169	2,149	2,085	247	301	251	287
74	Louisiana State U., Baton Rouge	2,511	2,490	1,946	2,080	1,507	1,464	1,382	1,427
75	George Mason U.	1,305	2,014	2,330	2,069	1,081	1,728	1,981	1,577
76	Virginia Commonwealth U.	1,853	2,572	3,606	2,063	1,837	2,493	3,549	2,026
77	U. Massachusetts, Amherst	2,591	3,254	1,960	2,007	2,097	2,174	1,358	1,334
78	U. Delaware	1,602	2,349	2,142	2,000	1,355	1,946	1,822	1,741

Appendix J. Total and Federally Financed Higher Education R&D Expenditures in Mathematical Sciences for the Top 100 Institutions, ranked by FY 2014 Total: FYs 2011-14

(Dollars in thousands)

Rank	Institution	Total				Federally financed			
		2011	2012	2013	2014	2011	2012	2013	2014
79	U. Colorado Boulder	2,991	2,426	1,783	1,989	2,991	2,415	1,775	1,810
80	Tulane U.	2,184	1,882	2,182	1,879	1,141	909	1,053	1,280
81	U. Kentucky	2,532	2,035	2,141	1,819	1,999	1,499	1,632	1,386
82	U. South Florida, Tampa	974	1,159	1,830	1,809	596	663	859	846
83	Delaware State U.	1,607	1,418	1,552	1,780	1,563	1,410	1,552	1,780
84	U. Connecticut	657	992	1,032	1,716	541	744	810	1,052
85	Rensselaer Polytechnic Institute	2,844	2,715	2,060	1,714	2,499	2,337	1,806	1,354
86	U. Texas, Arlington	1,895	2,385	1,664	1,706	1,231	1,194	666	676
87	U. Florida	3,002	3,158	2,218	1,674	1,759	1,931	1,250	1,240
88	Michigan Technological U.	1,624	1,645	1,772	1,668	118	77	163	155
89	U. New Mexico	2,493	1,892	1,547	1,613	2,396	1,783	1,350	1,434
90	U. Cincinnati	1,175	1,342	1,707	1,606	335	413	838	770
91	Bowling Green State U.	0	0	799	1,571	0	0	536	1,334
92	Worcester Polytechnic Institute	1,528	1,204	1,092	1,555	1,365	1,047	932	1,309
93	Rockefeller U.	1,323	1,089	1,749	1,498	669	386	640	199
94	Brigham Young U., Provo	1,050	656	1,198	1,491	966	644	1,160	1,401
95	Western Michigan U. and Homer Stryker M.D. School of Medicine	1,947	2,281	1,860	1,472	1,686	1,745	1,475	1,077
96	U. California, Santa Barbara	1,389	1,207	1,432	1,444	1,275	1,123	1,289	1,351
97	U. Louisiana, Lafayette	1,675	1,667	1,774	1,419	521	575	498	348
98	Mississippi State U.	1,105	1,003	1,284	1,371	76	37	125	238
99	U. Colorado Denver and Anschutz Medical Campus	1,146	850	1,499	1,344	1,143	844	1,463	1,257
100	Vanderbilt U.	1,476	1,031	1,123	1,343	1,449	991	1,081	1,238

i = imputed. ne = not eligible; institution did not meet the criteria for inclusion.

^a Johns Hopkins University includes Applied Physics Laboratory, with \$43,744 thousand in total and \$42,409 thousand in federally financed R&D expenditures in mathematical sciences in FY 2014.

NOTES: Institutions reporting zero expenditures in ranked total for FY 2014 are not listed in this table. Tied institutions are ranked alphabetically. Institutions ranked are geographically separate campuses headed by a campus-level president or chancellor. Some campuses are part of large multi-campus universities; some are part of state university systems. For a complete listing of campuses that belong to a larger university or system and their aggregate R&D expenditures, see table Research and Development Survey.

Appendix K. Total Higher Education R&D Expenditures in Physical Sciences for the Top 100 Institutions, ranked by FY 2014 Total

(Dollars in thousands)

Rank	Institution	2014				
		All physical sciences	Astronomy	Chemistry	Physics	Physical sciences,
	All institutions	4,616,578	566,910	1,724,364	2,055,773	269,531
1	California Institute of Technology	210,234	4,815	61,664	143,637	118
2	Johns Hopkins U. ^a	191456i	30520i	24528i	107003i	29405i
3	U. Arizona	164,784	124,647	15,195	24,942	0
4	U. California, Berkeley	120,047	71,942	27,632	18,028	2,445
5	Michigan State U.	119,461	0	8,546	110,915	0
6	Cornell U.	110,963	14,934	20,034	47,840	28,155
7	Massachusetts Institute of Technology	107,134	28,328	17,699	52,226	8,881
8	U. Colorado Boulder	94,410	31,836	21,466	38,424	2,684
9	Stanford U.	90,544	0	18,478	7,283	64,783
10	U. Maryland, College Park	85,573	21,994	9,245	50,345	3,989
11	U. Texas, Austin	82,699	13,469	20,972	47,140	1,118
12	Florida State U.	73,918	14	16,463	57,233	208
13	U. Wisconsin-Madison	71,503	5,791	18,734	30,135	16,843
14	U. California, San Diego	70,812	0	35,526	34,221	1,065
15	Princeton U.	70,098	11,422	21,810	36,866	0
16	Harvard U.	67,753	9,786	31,025	25,304	1,638
17	U. Illinois, Urbana-Champaign	65,359	3,256	31,861	30,233	9
18	U. California, Los Angeles	54,623	0	14,629	38,446	1,548
19	U. Chicago	54,449	14,125	18,975	15,139	6,210
20	U. Michigan, Ann Arbor	52,496	5,315	25,992	21,189	0
21	Pennsylvania State U., University Park and Hershey Medical Center	51,811	10,150	17,339	24,322	0
22	Georgia Institute of Technology	50,518	0	32,670	17,848	0
23	Rutgers, State U. New Jersey, New Brunswick	48,127	1,019	28,271	17,049	1,788
24	U. Minnesota, Twin Cities	46,377	1,839	19,539	24,999	0
25	Texas A&M U., College Station and Health Science Center	45,493	945	23,348	17,113	4,087
26	U. Washington, Seattle	45,040	6,749	19,361	18,930	0
27	Yale U.	42,760	6,964	18,778	17,018	0
28	Northwestern U.	42,499	0	33,303	6,978	2,218
29	U. California, Santa Barbara	41,547	6,936	10,200	22,899	1,512
30	U. Notre Dame	39,593	0	24,244	15,349	0
31	Columbia U. in the City of New York	39,586	7,592	10,074	21,920	0
32	Indiana U., Bloomington	35,535	1,755	16,484	17,295	1
33	Ohio State U.	35,413	2,845	14,192	17,963	413
34	U. California, Irvine	35,260	0	21,393	13,867	0
35	U. Hawaii, Manoa	34,225	26,472	1,986	5,607	160
36	Boston U.	34,203	1,748	9,803	21,036	1,616
37	Rice U.	33,319	0	17,954	15,365	0

Appendix K. Total Higher Education R&D Expenditures in Physical Sciences for the Top 100 Institutions, ranked by FY 2014 Total

(Dollars in thousands)

Rank	Institution	2014				
		All physical sciences	Astronomy	Chemistry	Physics	Physical sciences,
38	U. Massachusetts, Amherst	31,601	3,125	20,128	8,348	0
39	SUNY, Stony Brook U.	31,557	603	15,780	15,150	24
40	U. California, San Francisco	31,272	0	31,267	5	0
41	U. California, Davis	30,938	0	13,554	10,246	7,138
42	U. California, Santa Cruz	30,510	14,191	6,690	9,443	186
43	U. Central Florida	30,268	0	7,796	22,472	0
44	U. North Carolina, Chapel Hill	30,012	0	22,234	7,778	0
45	Vanderbilt U.	29,773	0	18,654	11,119	0
46	Brown U.	29,434i	0i	9,229i	12,027i	8,178
47	Purdue U., West Lafayette	29,066	0	16,076	12,990	0
48	U. Pittsburgh, Pittsburgh	27,198	2,865	14,565	9,768	0
49	Washington State U.	26,015i	592i	9,736i	14,955i	732
50	U. Nebraska, Lincoln	25,694	0	7,844	17,850	0
51	U. Pennsylvania	25,561	0	9,423	16,138	0
52	U. Florida	25,253	2,762	10,615	11,563	313
53	Arizona State U.	25,222	1,005	17,340	6,238	639
54	U. Virginia, Charlottesville	24,527	2,877	10,211	11,439	0
55	Emory U.	22,374i	0i	20,442i	1,932i	0i
56	North Carolina State U.	22,001	0	7,718	8,847	5,436
57	Louisiana State U., Baton Rouge	21,816	0	8,503	13,062	251
58	U. Akron	20,889	0	20,778	111	0
59	U. Iowa	20,704	1,393	5,236	14,075	0
60	Northeastern U.	19,972	0	10,565	9,407	0
61	U. Southern California	18,985	728	15,194	3,063	0
62	U. Utah	18,783	0	11,442	7,341	0
63	U. Tennessee, Knoxville	18,777	0	8,173	10,604	0
64	U. Oregon	18,494	0	10,518	7,976	0
65	Iowa State U.	18,221	0	9,083	9,138	0
66	Duke U.	17,406	0	7,152	10,254	0
67	Montana State U., Bozeman	17,373	0	10,245	7,088	40
68	U. Kansas	17,069	863	12,461	3,745	0
69	Catholic U. of America	16,957	0	471	7,810	8,676
70	SUNY, U. Buffalo	16,872	0	10,301	6,571	0
71	Wayne State U.	16,867	0	9,573	4,113	3,181
72	U. Houston	16,840	0	7,621	7,666	1,553
73	U. Delaware	16,161	2,730	7,103	6,328	0
74	U. Massachusetts, Lowell	15,373	0	4,265	11,108	0
75	Virginia Polytechnic Institute and State U.	14,856	0	9,316	4,839	701
76	U. Texas M. D. Anderson Cancer Center	14,590	0	0	14,590	0

Appendix K. Total Higher Education R&D Expenditures in Physical Sciences for the Top 100 Institutions, ranked by FY 2014 Total

(Dollars in thousands)

Rank	Institution	2014				
		All physical sciences	Astronomy	Chemistry	Physics	Physical sciences,
77	Washington U., Saint Louis	14,488	0	6,545	7,943	0
78	U. South Carolina, Columbia	14,216	0	10,055	4,161	0
79	U. California, Office of the President	13,646	13,646	0	0	0
80	U. Texas, Dallas	13,517	3,871	4,052	1,659	3,935
81	U. California, Riverside	13,423	0	7,428	5,995	0
82	Carnegie Mellon U.	13,000	0	3,763	6,799	2,438
83	U. Oklahoma, Norman and Health Science Center	12,972	0	7,787	5,185	0
84	Colorado State U., Fort Collins	12,956	0	8,453	4,503	0
85	New York U.	12,935	0	7,559	5,376	0
86	Texas Tech U.	12,739	0	9,081	3,658	0
87	U. Illinois, Chicago	12,665	0	7,276	5,389	0
88	U. Texas, Arlington	12,448	0	4,449	7,999	0
89	U. Rochester	12,422	0	6,239	6,183	0
90	New Jersey Institute of Technology	12,081	0	1,629	10,452	0
91	New Mexico State U.	12,045	6,450	3,508	1,973	114
92	U. Georgia	12,042	0	8,144	3,898	0
93	U. Mississippi and U. Mississippi, Jackson, Medical Center	11,794	0	1,612	10,182	0
94	Temple U.	11,661	0	7,236	4,111	314
95	North Dakota State U.	11,551	0	6,550	790	4,211
96	U. Alaska, Fairbanks	11,526	11,354	172	0	0
97	Kent State U.	11,342	0	4,568	2,761	4,013
97	Rensselaer Polytechnic Institute	11,342	0	4,004	6,699	639
99	U. Wisconsin-Milwaukee	11,316	0	4,917	6,170	229
100	U. Southern Mississippi	11,199	4	10,808	387	0

i = imputed. na = not applicable; institution did not exist or did not exist as a separate entity. ne = not eligible; institution did not meet the criteria for inclusion.

nec = not elsewhere classified.

^a Johns Hopkins University includes Applied Physics Laboratory, with \$165,181 thousand in total R&D

NOTES: Institutions reporting zero expenditures in ranked total for FY 2014 are not listed in this table. Tied institutions are ranked alphabetically. Institutions ranked are geographically separate campuses headed by a campus-level president or chancellor. Some campuses are part of large multi-campus universities; some are part of state university systems. For a complete listing of campuses that belong to a larger university or system and their aggregate R&D expenditures, see table 84.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, Higher Education Research and Development Survey.

Appendix L. Total and Federally Financed Higher Education R&D Expenditures in Psychology for the Top 100 Institutions, ranked by FY 2014 Total: FYs 2011-14

(Dollars in thousands)

Rank	Institution	Total				Federally financed			
		2011	2012	2013	2014	2011	2012	2013	2014
	All institutions	1,158,534	1,179,538	1,128,410	1,140,755	834,911	859,224	776,470	751,215
1	U. North Carolina, Chapel Hill	41,459	44,595	46,285	46,869	27,326	27,203	27,359	25,323
2	Florida State U.	22,933	21,396	24,704	31,565	15,939	15,055	18,153	25,070
3	U. Minnesota, Twin Cities	22,779	21,661	25,041	25,781	18,139	16,633	18,187	18,322
4	Pennsylvania State U., University Park and Hershey Medical Center	29,686	31,056	28,526	23,476	21,713	22,737	20,806	15,945
5	U. Michigan, Ann Arbor	22,281	24,914	24,244	21,479	14,211	15,451	14,709	11,838
6	New York U.	17,826	20,726	21,235	21,391	15,464	18,043	18,492	18,391
7	U. California, San Diego	25,418	25,447	21,353	19,349	19,287	17,392	14,132	13,285
8	U. Connecticut	23,165	24,290	22,981	18,048	18,031	18,011	16,788	11,565
9	U. Illinois, Urbana-Champaign	16,045	16,546	18,190	17,753	11,045	10,255	9,948	8,782
10	U. Georgia	19,285	21,072	20,680	17,578	11,745	13,271	12,646	9,716
11	Rutgers, State U. New Jersey, New Brunswick	15,595	12,779	15,386	17,562	7,285	7,668	6,375	8,476
12	San Jose State U.	14,356	14,284	15,798	17,209	14,041	13,648	15,040	16,381
13	U. Texas M. D. Anderson Cancer Center	22,452	22,921	17,292	16,600	8,735	7,803	6,583	6,014
14	U. Colorado Boulder	17,105	17,584	16,293	15,675	15,250	15,214	14,652	14,708
15	U. Rochester	17,643	17,991	15,621	15,327	14,680	15,411	13,160	12,928
16	Princeton U.	8,909	9,810	9,991	15,101	5,694	5,534	4,475	6,805
17	U. Nebraska, Lincoln	12,791	13,690	17,889	14,955	8,493	9,150	9,996	8,722
18	U. Pennsylvania	9,128	10,321	14,512	14,926	8,346	8,892	11,347	12,589
19	U. Pittsburgh, Pittsburgh	9,787	9,905	10,908	14,337	8,066	8,421	9,169	12,533
20	Stanford U.	13,865	11,713	11,799	14,067	11,031	8,260	7,701	9,060
21	Arizona State U.	12,726	12,419	12,104	13,805	10,109	10,383	8,962	9,688
22	U. Illinois, Chicago	10,848	13,430	14,156	13,303	8,214	9,140	9,453	8,304
23	Boston U.	11,226	12,819	12,726	13,207	10,367	11,585	9,925	10,726
24	Indiana U., Bloomington	15,162	11,884	13,008	13,043	9,491	7,298	7,283	8,641
24	U. California, Los Angeles	17,347	13,961	11,099	13,043	12,427	8,987	7,140	7,923
26	San Diego State U.	18,694	14,677	12,592	12,913	13,826	11,384	9,061	8,310
27	Utah State U.	6,512	8,353	9,264	12,700	4,883	6,310	6,947	9,812
28	Temple U.	11,306	10,941	12,707	12,693	8,209	8,387	10,266	9,325
29	Cornell U.	7,603	8,079	10,506	11,892	3,739	3,435	3,972	4,046
30	U. Houston	10,172	10,876	10,964	11,625	7,756	8,700	8,802	7,490
31	U. South Florida, Tampa	13,855	14,624	11,508	11,201	9,777	8,792	7,164	7,214
32	Vanderbilt U.	13,821	14,234	13,990	11,101	11,610	12,223	11,414	9,016
33	U. Kentucky	12,112	11,048	9,477	10,797	9,824	8,773	7,479	8,947
34	Yale U.	10,335	7,912	9,694	10,778	4,769	4,286	4,304	4,196
35	U. Oregon	9,734	9,010	8,730	10,423	8,652	8,225	7,855	9,155
36	U. California, Berkeley	10,401	8,568	7,081	10,413	6,680	5,364	4,055	4,488
37	Duke U.	23,325	17,778	23,851	10,297	14,584	15,583	20,433	7,358
38	U. Chicago	7,796	9,947	11,504	10,127	7,718	9,797	9,509	7,054

Appendix L. Total and Federally Financed Higher Education R&D Expenditures in Psychology for the Top 100 Institutions, ranked by FY 2014 Total: FYs 2011-14

(Dollars in thousands)

Rank	Institution	Total				Federally financed			
		2011	2012	2013	2014	2011	2012	2013	2014
39	CUNY, Hunter C.	8,318	9,421	10,492	10,126	6,026	6,794	7,874	7,221
40	U. Southern California	8,303	10,488	9,642	10,059	7,479	8,249	6,963	7,368
41	U. Washington, Seattle	9,379	8,395	9,203	9,637	8,745	7,850	7,980	7,920
42	U. Miami	13,057	11,559	9,739	9,430	11,351	8,671	6,963	6,238
43	SUNY, Binghamton U.	9,445	11,384	10,229	9,159	4,741	4,720	4,350	3,835
44	Brown U.	4,088	4,358	3,487	9127i	2,894	3,373	3,471	6,009
45	Tufts U.	4,351	5,362	7,634	8,983	1,954	2,220	2,542	2,597
46	U. Iowa	8,635	8,906	8,929	8,776	6,458	6,791	6,851	6,527
47	Carnegie Mellon U.	9,829	10,812	10,125	8,607	8,536	9,068	8,840	7,623
48	U. Texas, Austin	8,988	9,429	8,375	8,295	7,531	7,245	6,943	6,379
49	U. New Mexico	11,906	13,487	9,435	8,203	9,769	11,720	8,152	6,577
50	Ohio State U.	13,326	12,683	11,069	8,109	10,908	10,551	9,000	6,678
51	Michigan State U.	7,153	8,894	9,103	8,099	5,226	6,827	6,648	5,546
52	Florida International U.	4,608	3,459	5,761	7,798	3,116	2,557	3,527	5,127
53	U. South Carolina, Columbia	5,559	7,467	7,358	7,358	4,554	4,476	5,418	5,413
54	Georgia State U.	6,146	5,486	9,105	7286i	3,576	3,240	3,799	4,056
55	U. Memphis	8,295	6,586	6,459	7,115	4,096	2,964	2,498	3,023
56	Harvard U.	5,821	4,247	6,842	7,084	5,496	3,649	4,035	3,806
57	U. California, Santa Barbara	8,125	6,837	6,024	6,912	5,372	5,673	4,630	5,063
58	George Mason U.	5,861	6,160	6,234	6,806	4,918	5,146	5,333	4,844
59	Washington U., Saint Louis	7,804	7,169	6,701	6,796	5,696	4,779	4,190	4,316
60	U. Florida	9,584	6,522	6,422	6,626	6,025	4,160	4,795	5,045
61	U. Virginia, Charlottesville	9,171	8,626	7,595	6,443	7,032	6,715	5,922	5,049
62	Virginia Commonwealth U.	4,004	4,759	3,632	6,427	3,464	4,184	3,254	5,132
63	Georgia Institute of Technology	6,773	6,249	7,070	6,416	4,102	4,312	5,235	4,790
64	U. California, Irvine	7,825	8,947	7,325	5,979	6,169	6,429	5,383	4,053
65	U. Maryland, College Park	6,566	7,203	7,652	5,652	4,955	5,519	6,022	4,176
66	Texas Tech U.	1,338	1,673	3,577	5,610	150	70	149	257
67	U. Massachusetts, Amherst	5,166	4,865	4,455	5,209	3,066	3,300	3,169	3,500
68	U. Wisconsin-Madison	7,251	5,678	5,285	5,151	4,623	3,591	3,510	2,979
69	Northeastern U.	1,990	3,209	4,422	5,009	1,878	2,530	3,258	4,136
70	U. Notre Dame	3,809	4,160	4,589	5,005	2,480	2,548	2,471	2,860
71	U. Texas, El Paso	4,350	5,013	5,263	4,690	2,829	2,916	3,780	3,629
72	U. Arizona	3,625	3,461	4,524	4,602	2,111	1,979	2,285	1,935
73	U. North Carolina, Greensboro	2,433	1,796	2,976	4,565	2,098	1,708	2,588	2,613
74	Virginia Polytechnic Institute and State U.	4,497	3,634	2,624	4,564	3,036	2,091	1,417	2,677
75	Wayne State U.	4,993	5,164	4,915	4,527	2,909	3,888	3,616	3,291
76	Columbia U. in the City of New York	7,614	6,633	4,288	4,464	6,921	5,868	3,700	3,502
77	U. California, Davis	4,210	3,473	4,536	4,450	2,647	2,014	2,576	2,423
78	American U.	1,108	1,219	1,722	4,371	409	469	344	1,110

Appendix L. Total and Federally Financed Higher Education R&D Expenditures in Psychology for the Top 100 Institutions, ranked by FY 2014 Total: FYs 2011-14

(Dollars in thousands)

Rank	Institution	Total				Federally financed			
		2011	2012	2013	2014	2011	2012	2013	2014
79	Northwestern U.	3,880	4,184	4,461	4,264	3,088	2,980	2,645	2,942
80	Columbia U., Teachers C.	5,236	5,532	4,465	4,132	4,737	5,078	3,831	2,928
81	George Washington U.	4,880	3,321	3,585	3,930	2,638	2,448	2,684	2,753
82	Rush U.	2,827	3,248	3,405	3,884	2,790	2,180	2,474	3,015
83	Purdue U., West Lafayette	4,809	5,817	4,520	3,768	4,295	4,879	3,293	1,959
84	U. Delaware	4,306	3,872	3,336	3,737	3,796	3,377	2,914	3,210
85	North Dakota State U.	2,895	3,261	4,040	3,697	2,714	2,964	2,207	2,158
86	Drexel U.	3,593	3,345	2,784	3,688	2,102	2,584	2,125	2,467
87	Johns Hopkins U. ^a	5,374	5493i	4213i	3633i	4,881	4,900	3,521	3,284
88	U. Alabama, Tuscaloosa	2,796	2,941	2,482	3,601	1,790	1,720	1,812	2,283
89	U. Utah	1,576	2,100	3,681	3,588	966	1,051	2,184	2,294
90	SUNY, U. Buffalo	5,857	5,076	4,037	3,501	4,193	3,477	2,708	2,944
91	Texas A&M U., College Station and Health Science Center	4,338	3,282	3,547	3,423	3,181	2,330	2,140	1,465
92	Dartmouth C.	6,336	5,553	3,723	3,416	4,660	4,612	3,174	3,014
93	Brandeis U.	2,702	2,929	2,509	3329i	2,594	2,792	2,397	2,727
94	U. Massachusetts, Boston	7,035	5,478	3,866	3,301	2,825	3,751	2,350	1,654
95	Kansas State U.	2,307	2,405	2,608	3,275	1,345	1,470	1,316	1,920
96	Fuller Theological Seminary	842	ne	2,329	3,106	0	ne	0	0
97	SUNY, Stony Brook U.	8,087	6,089	5,748	3,093	4,801	3,458	2,917	2,931
98	U. Central Florida	842	1,590	1,802	3,082	823	1,580	1,697	1,724
99	Washington State U.	2,063	2,076	2,203	3053i	991	1,135	1,414	1,293
100	San Francisco State U.	2,193	3,077	3,561	3,017	1,864	2,438	2,830	2,247

i = imputed. na = not applicable; institution did not exist or did not exist as a separate entity. ne = not eligible; institution did not meet the criteria for inclusion.

^a Johns Hopkins University includes Applied Physics Laboratory, with \$0 in both total and federally financed R&D expenditures in psychology in FY 2014.

NOTES: Institutions reporting zero expenditures in ranked total for FY 2014 are not listed in this table. Tied institutions are ranked alphabetically. Institutions ranked are geographically separate campuses headed by a campus-level president or chancellor. Some campuses are part of large multi-campus universities; some are part of state university systems. For a complete listing of campuses that belong to a larger university or system and their aggregate R&D expenditures, see table 84.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, Higher Education Research and Development Survey.

Appendix M. Higher Education R&D Expenditures in the Social Sciences ranked by all FY 2014 Social Sciences: By Sub-Field for FY 2014 (Top 100 Institutions)

(Dollars in thousands)

Rank	Institution	2014				
		All social sciences	Economics	Political sciences	Sociology	Social sciences, nec
	All institutions	2,210,253	428,736	425,716	503,889	851,912
1	U. Michigan, Ann Arbor	149,442	29,587	23,368	25,770	70,717
2	U. North Carolina, Chapel Hill	94,306	203	4,944	74,239	14,920
3	U. Maryland, College Park	93,496	3,875	10,173	4,885	74,563
4	Harvard U.	64,713	8,675	19,279	1,908	34,851
5	U. California, Berkeley	52,023	28,052	4,353	5,012	14,606
6	Arizona State U.	50,746	2,830	11,691	18,796	17,429
7	U. Wisconsin-Madison	49,188	8,198	3,446	13,852	23,692
8	Rutgers, State U. New Jersey, New Brunswick	49,107	1,871	10,519	2,322	34,395
9	Cornell U.	37,480	21,911	452	10,326	4,791
10	U. California, Los Angeles	35,182	388	1,038	5,796	27,960
11	Pennsylvania State U., University Park and Hershey Medical Center	34,659	2,863	4,424	27,372	0
12	U. Minnesota, Twin Cities	33,191	7,204	6,733	16,188	3,066
13	Michigan State U.	32,907	17,154	3,085	2,879	9,789
14	Indiana U., Bloomington	29,396	2,567	9,911	4,664	12,254
15	Princeton U.	27,603	1,813	24,363	1,130	297
16	George Mason U.	26,673	16,523	2,868	1,684	5,598
17	U. Southern California	26,657	5,527	1,137	1,702	18,291
18	U. Pennsylvania	24,786	1,188	3,954	7,943	11,701
19	U. South Florida, Tampa	24,257	667	874	5,607	17,109
20	U. California, Davis	23,559	8,981	1,302	1,098	12,178
21	Duke U.	23,453	5,882	10,582	3,942	3,047
22	Mississippi State U.	22,546	1,403	807	1,676	18,660
23	Purdue U., West Lafayette	22,446	10,278	511	9,673	1,984
24	U. Arizona	22,303	6,646	2,287	6,975	6,395
25	George Washington U.	22,066	1,926	11,469	1,934	6,737
26	Brandeis U.	21,705	28	427	21,250	0
27	Massachusetts Institute of Technology	21,542	11,813	3,632	23	6,074
28	U. Chicago	20,044	4,705	2,359	2,039	10,941
29	Georgetown U.	19,454	17	15,677	1,042	2,718
30	Northwestern U.	18,806	1,563	14,311	1,731	1,201
31	Ohio State U.	18,106	4,490	5,053	2,424	6,139
32	U. California, San Diego	17,809	1,854	10,552	3,746	1,657
33	U. Illinois, Urbana-Champaign	17,432	6,257	7,516	1,061	2,598
34	Brown U.	17,243	5,453	2,612	2,764	6,414
35	U. Georgia	17,153	5,512	4,362	3,618	3,661
36	Texas A&M U., College Station and Health Science Center	17,125	3,615	3,191	1,921	8,398
37	Stanford U.	16,777	2,772	154	11,281	2,570
38	American U.	16,140	4,552	5,820	1,976	3,792
39	Texas Tech U.	15,818	2,842	988	759	11,229

Appendix M. Higher Education R&D Expenditures in the Social Sciences ranked by all FY 2014 Social Sciences: By Sub-Field for FY 2014 (Top 100 Institutions)

(Dollars in thousands)

Rank	Institution	2014				
		All social sciences	Economics	Political sciences	Sociology	Social sciences, nec
40	North Dakota State U.	15,425	4,513	351	1,003	9,558
41	U. Colorado Boulder	15,292	225	831	12,305	1,931
42	U. Texas, Austin	14,937	310	529	8,595	5,503
43	U. Central Florida	14,923	7,085	2,255	1,863	3,720
44	U. Delaware	14,465	2,386	0	2,256	9,823
45	Washington State U.	14,162	3,825	1,524	1,683	7,130
46	U. California, Santa Barbara	13,607	888	53	387	12,279
47	U. Nebraska, Lincoln	13,473	3,616	2,785	3,511	3,561
48	Florida State U.	13,340	2,522	2,467	1,003	7,348
49	North Carolina State U.	13,138	4,529	715	1,291	6,603
50	U. Florida	12,981	3,808	177	2,153	6,843
51	U. Illinois, Chicago	12,959	366	426	366	11,801
52	New York U.	12,952	2,849	4,251	1,420	4,432
53	Iowa State U.	12,919	4,409	346	8,129	35
54	Georgia State U.	12,616	7,873	2,357	834	1,552
55	U. New Mexico	12,607	633	455	5,878	5,641
56	U. Washington, Seattle	12,341	46	4,317	5,123	2,855
57	Columbia U., Teachers C.	11,741	9,765	0	0	1,976
58	SUNY, U. Albany	11,471	267	3,759	5,014	2,431
59	U. California, Irvine	11,099	568	3,427	3,133	3,971
60	Georgia Institute of Technology	10,822	6,732	3,752	80	258
61	U. Maryland, Baltimore County	10,349	3	10,187	120	39
62	Portland State U.	10,253	516	2,232	1,431	6,074
63	U. Missouri, Columbia	9,917	7,792	1,651	263	211
64	SUNY, Binghamton U.	9,867	1,274	1,771	3,310	3,512
65	Naval Postgraduate School	9,759	15	7,779	297	1,668
66	U. Iowa	9,753	106	6,161	437	3,049
67	Indiana U.-Purdue U., Indianapolis	9,521	205	4,097	2,649	2,570
68	Rice U.	9,402	228	6,345	2,589	240
69	Johns Hopkins U. ^a	9,139	438	71	8,250	380
70	U. Kentucky	9,116	4,065	1,158	1,632	2,261
71	Tufts U.	8,941	377	8,563	1	0
72	Columbia U. in the City of New York	8,596	1,185	4,568	2,843	0
73	U. Texas M. D. Anderson Cancer Center	8,578	0	0	8,578	0
74	Virginia Polytechnic Institute and State U.	7,822	1,216	1,303	1,890	3,413
75	Louisiana State U., Baton Rouge	7,729	5,410	216	240	1,863
76	U. Tennessee, Knoxville	7,702	5,536	431	974	761
77	U. Utah	7,672	181	75	478	6,938
78	Yale U.	7,592	2,852	479	3,879	382
79	Syracuse U.	7,580	1,354	4,380	1,514	332

Appendix M. Higher Education R&D Expenditures in the Social Sciences ranked by all FY 2014 Social Sciences: By Sub-Field for FY 2014 (Top 100 Institutions)

(Dollars in thousands)

Rank	Institution	2014				
		All social sciences	Economics	Political sciences	Sociology	Social sciences, nec
80	Florida International U.	7,508	18	1,067	140	6,283
81	Northeastern U.	7,262	192	2,963	799	3,308
82	C. of William and Mary and Virginia Institute of Marine Science	7,013	122	6,737	33	121
83	U. Oklahoma, Norman and Health Science Center	6,891	617	2,539	706	3,029
84	U. New Hampshire	6,810	76	12	6,626	96
85	U. Connecticut	6,795	2,255	573	2,947	1,020
86	U. Virginia, Charlottesville	6,750	810	3,947	1,239	754
87	U. Hawaii, Manoa	6,729	17	0	799	5,913
88	U. Massachusetts, Boston	6,658	165	3,727	1,789	977
89	National Defense U.	6,553	0	155	117	6,281
90	U. South Carolina, Columbia	6,512	474	380	1,807	3,851
91	Claremont Graduate U.	6,248	127	147	0	5,974
92	Carnegie Mellon U.	6,185	495	1,632	15	4,043
93	Case Western Reserve U.	6,166	19	15	999	5,133
94	U. Notre Dame	6,157	879	3,277	1,273	728
95	U. Cincinnati	6,041	0	1,396	497	4,148
96	Kansas State U.	6,035	4,604	0	342	1,089
97	Vanderbilt U.	6,017	379	4,254	998	386
98	U. Tennessee, Knoxville, Institute of Agriculture	5,735	5,735	0	0	0
99	Rutgers, State U. New Jersey, Newark	5,698	44	3,297	14	2,343
100	Oregon State U.	5,026	2,258	17	2,224	527

i = imputed. ne = not eligible; institution did not meet the criteria for inclusion.

nec = not elsewhere classified.

^a Johns Hopkins University includes Applied Physics Laboratory, with \$7,145 thousand in total R&D expenditures in social sciences in FY 2014.

NOTES: Institutions reporting zero expenditures in ranked total for FY 2014 are not listed in this table. Tied institutions are ranked alphabetically. Institutions ranked are geographically separate campuses headed by a campus-level president or chancellor. Some campuses are part of large multi-campus universities; some are part of state university systems. For a complete listing of campuses that belong to a larger university or system and their aggregate R&D expenditures, see table 84.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, Higher Education Research and Development Survey.

Appendix N. Higher Education R&D Expenditures in Non-Science and Engineering Fields, Ranked by all FY 2014 Non-S&E Fields (Top 100 Institutions)

(Dollars in thousands)

Rank	Institution	2014								
		All non-S&E fields	Business and management	Communication, journalism, and library science	Education	Humanities	Law	Social work	Visual and performing arts	Other
	All institutions	3,412,103	483,013	166,904	1,242,490	399,310	148,440	224,582	95,775	651,589
1	U. Wisconsin-Madison	123,734	48,318	3,243	31,923	13,707	1,698	4,271	1,291	19,283
2	Massachusetts Institute of Technology	93,009	33,069	0	13,044	1,433	0	0	3,146	42,317
3	U. Washington, Seattle	85,205	1,052	13,677	47,470	2,076	4,178	15,763	165	824
4	U. Michigan, Ann Arbor	69,659	11,324	1,883	13,260	24,833	4,437	5,154	3,104	5,664
5	Purdue U., West Lafayette	62,466	8,312	1,029	4,699	3,479	0	0	597	44,350
6	Ohio State U.	62,239	2,423	3,993	47,676	4,485	101	1,435	718	1,408
7	U. Texas, Austin	59,078	9,195	5,777	21,178	1,265	338	5,850	225	15,250
8	Harvard U.	58,011	6,319	3,978	35,432	5,591	5,916	0	775	0
9	U. Florida	56,185	2,436	1,706	7,539	1,891	847	0	1,718	40,048
10	U. South Florida, Tampa	52,063	7,464	3,829	23,205	4,682	0	848	2,357	9,678
11	U. Kansas	50,348	462	104	34,903	1,456	50	13,055	176	142
12	Brown U.	49,614	199	0	20,736	19,922	0	0	3,530	5,227
13	Stanford U.	47,003	284	809	43,722	1,390	620	0	80	98
14	Arizona State U.	46,070	4,554	2,463	10,841	4,972	918	1,401	687	20,234
15	Columbia U. in the City of New York	45,876	2,473	7,273	2,950	11,219	8,013	12,562	310	1,076
16	Clemson U.	44,199	340	64	2,953	167	0	0	18	40,657
17	Georgia State U.	42,960	10,433	9,445	13,282	3,006	1,070	2,726	783	2,215
18	U. Central Florida	42,492	18,841	1,980	7,044	9,672	246	165	3,371	1,173
19	U. Georgia	42,026	7,903	2,768	10,222	8,257	5,739	727	4,683	1,727
20	Washington State U.	38,472	8,417	6,735	18,664	311	0	1,709	132	2,504
21	U. Southern California	36,716	2,688	10,883	7,009	3,641	2,109	6,865	3,403	118
22	U. Pennsylvania	36,036	11,728	6,710	7,997	2,800	1,726	3,494	1,581	0
23	U. California, Berkeley	35,858	5,175	2,170	11,523	3,031	13,465	0	494	0
24	Michigan State U.	34,405	1,543	3,384	19,355	1,505	335	392	837	7,054
25	Texas Tech U.	34,182	12,039	2,066	12,066	3,695	1,583	0	2,733	0
26	U. North Carolina, Chapel Hill	34,165	2,883	3,662	413	6,786	498	10,696	2,128	7,099
27	Indiana U., Bloomington	33,659	5,863	1,983	8,965	191	1,536	0	2,120	13,001
28	New York U.	33,009	1,935	0	17,837	2,941	1,715	5,399	610	2,572
29	U. Massachusetts, Boston	31,165	1,079	54	25,500	556	0	1,016	85	2,875
30	Texas A&M U., College Station and Health Science Center	28,062	5,835	0	17,317	3,679	1,227	0	0	4
31	U. California, Los Angeles	28,014	6,793	791	12,594	5,116	1,625	0	1,095	0
32	U. Oklahoma, Norman and Health Science Center	26,240	0	1,946	13,249	604	63	83	35	10,260
33	U. Minnesota, Twin Cities	25,990	8,822	336	9,118	1,453	1,508	1,331	1,164	2,258
34	American U.	25,590	10,960	7,992	0	0	5,720	0	0	918
35	Florida International U.	25,044	2,943	302	7,886	10,418	106	1,793	501	1,095
36	U. South Carolina, Columbia	24,810	1,282	506	17,832	1,836	0	3,162	41	151
37	Vanderbilt U.	24,472	72	246	19,134	2,880	1,860	0	42	238
38	Virginia Commonwealth U.	24,318	57	82	19,134	496	0	1,011	1,268	2,270
39	Northwestern U.	23,829	6,501	4,787	6,334	1,442	1,847	0	848	2,070
40	U. Nebraska, Lincoln	23,420	5,398	2,141	4,910	5,209	2,372	0	2,711	679
41	U. Cincinnati	23,302	1,879	112	3,040	3,160	646	447	3,006	11,012
42	U. Illinois, Urbana-Champaign	23,202	1,961	2,924	4,442	3,630	1,292	3,080	647	5,226
43	U. Notre Dame	21,767	4,811	0	0	12,170	399	0	694	3,693
44	Boston C.	21,398	4,043	21	14,122	450	0	1,826	13	923
45	Florida State U.	21,158	338	425	15,281	715	339	590	807	2,663
46	U. Pittsburgh, Pittsburgh	20,968	1,236	3	6,235	918	69	9,651	0	2,856
47	U. Virginia, Charlottesville	20,844	360	118	14,015	5,033	488	0	40	790
48	U. Maryland Baltimore	20,586	0	139	0	0	534	17,051	0	2,862
49	U. Louisville	20,177	495	177	5,453	497	520	1,587	119	11,329
50	U. Houston	18,434	3,673	0	4,432	1,742	337	0	0	8,250
51	Syracuse U.	18,287	4,010	1,050	4,056	1,171	5,503	1,221	348	928
52	San Diego State U.	18,200	6,176	1,486	2,952	3,859	0	935	975	1,817
53	Washington U., Saint Louis	17,993	216	0	442	6	29	17,268	32	0
54	U. California, Irvine	17,741	705	0	4,656	10,274	2,018	0	88	0

Appendix N. Higher Education R&D Expenditures in Non-Science and Engineering Fields, Ranked by all FY 2014 Non-S&E Fields (Top 100 Institutions)

(Dollars in thousands)

Rank	Institution	2014								
		All non-S&E fields	Business and management	Communication, journalism, and library science	Education	Humanities	Law	Social work	Visual and performing arts	Other
55	Temple U.	17,545	1,486	526	4,564	305	3,180	3,909	525	3,050
56	Rutgers, State U. New Jersey, New Brunswick	17,040	610	429	7,128	4,615	23	1,110	314	2,811
57	U. Massachusetts, Amherst	16,989	1,047	600	10,496	2,035	2	48	736	2,025
58	U. Colorado Boulder	16,593	2,111	138	12,208	269	1,524	327	16	0
58	U. New Hampshire	16,593	129	4	14,399	685	155	1,096	0	125
60	SUNY, U. Buffalo	16,479	1,533	238	12,402	947	430	897	32	0
61	Florida A&M U.	16,472	511	2,788	1,782	12	397	0	0	10,982
62	Iowa State U.	15,970	3,838	329	7,188	3,957	0	0	577	81
63	Portland State U.	15,653	842	76	1,477	63	0	13,137	5	53
64	Pennsylvania State U., University Park and Hershey Medical Center	15,068	5,615	342	4,444	4,110	291	0	266	0
65	Johns Hopkins U. ^a	14,942	0	1,204	0	13,738	0	0	0	0
66	U. Texas, Arlington	14,914	613	486	520	520	0	1,269	121	11,385
67	George Washington U.	14,661	5,360	572	4,598	2,215	1,258	0	156	502
68	U. West Florida	14,499	9,251	5	3,211	58	0	1,196	7	771
69	Old Dominion U.	14,205	532	0	12,276	238	0	0	143	1,016
70	U. Arkansas, Fayetteville	14,121	5,357	14	4,315	735	578	499	3	2,620
71	Illinois State U.	13,947	1,072	10	11,777	51	0	39	46	952
72	U. Oregon	13,548	29	39	13,389	54	24	0	0	13
73	Boston U.	13,478	1,179	605	3,642	3,624	1,672	1,784	13	959
74	Texas State U.	13,355	408	0	2,043	1,086	7,993	0	0	1,825
75	George Mason U.	13,187	59	1,234	9,499	1,432	655	95	44	169
76	U. Maryland, College Park	12,816	1,185	972	4,241	1,728	0	0	419	4,271
77	Winthrop U.	12,770	11	5	3,706	10	0	8,535	9	494
78	U. Mississippi and U. Mississippi, Jackson, Medical Center	12,636	797	48	412	1,467	2,234	11	96	7,571
79	U. Iowa	12,295	823	730	3,439	2,784	65	398	632	3,424
80	Fayetteville State U.	12,233	2,304	761	7,674	187	0	485	197	625
81	U. Arizona	12,224	386	1,343	5,111	2,449	1,828	0	1,107	0
82	U. California, Davis	12,032	401	88	5,316	736	694	0	4,720	77
83	U. Massachusetts, Lowell	11,996	1,846	23	3,264	684	0	0	494	5,685
84	U. Chicago	11,760	2,514	0	0	889	487	6,182	0	1,688
85	New Jersey Institute of Technology	11,710	890	0	5,324	97	129	0	0	5,270
86	U. Memphis	11,215	2,303	172	5,981	459	63	343	966	928
87	Fordham U.	10,875	1,941	168	3,817	1,505	1,537	1,549	123	235
88	U. Connecticut	10,677	3,808	430	3,212	486	90	2,447	204	0
89	Virginia Polytechnic Institute and State U.	10,663	446	361	7,803	180	0	0	1,067	806
90	U. Utah	10,123	1,312	1,703	3,132	2,649	1,211	0	116	0
91	U. Colorado Denver and Anschutz Medical Campus	9,790	22	69	4,835	682	0	0	0	4,182
92	Georgetown U.	9,743	1,460	136	811	1,124	5,950	16	149	97
93	C. of William and Mary and Virginia Institute of Marine Science	9,587	120	0	7,690	1,307	269	0	62	139
94	Mississippi State U.	9,478	1,140	257	2,799	2,156	0	0	206	2,920
95	U. Wisconsin-Milwaukee	9,436	544	409	996	151	0	295	82	6,959
96	U. Texas, El Paso	9,062	1,856	761	1,015	1,383	1	87	114	3,845
97	California Institute of Technology	9,045	0	0	0	5,656	0	0	0	3,389
98	Tulane U.	9,041	162	14	0	54	2,728	0	2	6,081
99	Yale U.	8,838	134	39	0	7,129	1,039	0	497	0
100	Montana State U., Bozeman	8,702	110	145	3,064	39	0	0	65	5,279

i = imputed. na = not applicable; institution did not exist or did not exist as a separate entity. ne = not eligible; institution did not meet the criteria for inclusion.

S&E = science and engineering.

^a Johns Hopkins University includes Applied Physics Laboratory, with \$0 in total non-S&E R&D expenditures in FY 2014.

NOTES: Institutions reporting zero expenditures in ranked total for FY 2014 are not listed in this table. Tied institutions are ranked alphabetically. Institutions ranked are geographically separate campuses headed by a campus-level president or chancellor. Some campuses are part of large multi-campus universities; some are part of state university systems. For a complete listing of campuses that belong to a larger university or system and their aggregate R&D expenditures, see table 84.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, Higher Education Research and Development Survey.

Appendix O. Federally Financed Higher Education R&D Expenditures, Ranked by all federal R&D Expenditures, by Federal Agency: FY 2014 (Top 300 Institutions)

(Dollars in thousands)

Rank	Institution	All federal R&D expenditures	DOD	DOE	HHS	NASA	NSF	USDA	Other ^a
	All institutions	37,922,314	4,922,036	1,803,449	20,277,673	1,326,468	5,125,870	1,059,350	3,407,468
1	Johns Hopkins U. ^b	1,950,016	734,989	7,720	602,905	186,407	33,009	1,519	383,467
2	U. Washington, Seattle	909,034	98,585	28,695	558,958	13,545	128,294	9,999	70,958
3	U. Michigan, Ann Arbor	742,160	76,474	38,635	472,691	38,037	77,596	2,492	36,235
4	Stanford U.	637,730	86,549	26,463	406,581	17,903	86,219	182	13,833
5	U. Pennsylvania	620,396	48,940	11,496	501,266	3,613	35,469	912	18,700
6	U. North Carolina, Chapel Hill	610,664	14,377	9,701	461,208	558	36,914	661	87,245
7	Columbia U. in the City of New York	608,588	39,550	16,545	410,205	18,732	93,980	4,297	25,279
8	U. California, San Diego	599,095	81,182	20,934	374,466	7,360	84,906	573	29,674
9	U. Pittsburgh, Pittsburgh	582,136	36,862	9,340	488,791	1,040	25,880	310	19,913
10	Harvard U.	572,918	55,764	18,069	419,477	11,602	48,853	223	18,930
11	Duke U.	557,969	54,271	9,565	429,096	3,281	38,562	898	22,296
12	U. Wisconsin-Madison	548,388	23,450	70,548	280,579	12,546	89,532	22,552	49,181
13	U. California, San Francisco	544,697	14,832	490	525,308	564	3,502	1	0
14	Pennsylvania State U., University Park and Hershey Medical Center	520,574	209,259	48,612	117,770	12,324	66,059	27,033	39,517
15	Georgia Institute of Technology	512,015	335,725	27,169	37,869	13,653	69,194	669	27,736
16	U. Minnesota, Twin Cities	489,767	23,509	25,392	317,867	8,341	72,567	24,719	17,372
17	Massachusetts Institute of Technology	483,891	126,584	88,988	117,141	33,414	97,233	0	20,531
18	Yale U.	480,384	27,455	12,827	396,584	3,286	33,040	1,136	6,056
19	U. California, Los Angeles	465,170	35,587	23,074	326,539	15,861	56,204	539	7,366
20	Ohio State U.	454,484	34,146	22,459	237,173	5,437	53,778	28,062	73,429
21	Cornell U.	439,770	30,218	24,475	202,720	9,521	127,792	32,770	12,274
22	U. Southern California	431,430	79,775	12,902	264,308	4,557	39,348	319	30,221
23	Vanderbilt U.	422,448	36,816	8,821	333,233	1,253	20,560	116	21,649
24	Northwestern U.	391,946	36,909	26,987	271,475	2,350	45,011	113	9,101
25	Washington U., Saint Louis	383,734	6,066	9,254	343,508	6,743	16,310	85	1,768
26	Rutgers, State U. New Jersey, New Brunswick	360,157	20,555	9,750	206,351	2,027	52,977	23,926	44,571
27	U. Illinois, Urbana-Champaign	343,275	46,437	46,734	67,908	6,193	130,010	17,473	28,520
28	U. Maryland, College Park	333,409	87,474	17,149	43,759	46,401	52,623	19,863	66,140
29	U. Texas, Austin	332,758	123,161	42,454	64,493	12,957	68,859	412	20,422
30	New York U.	330,484	12,531	5,387	274,988	757	29,989	981	5,851
31	Emory U.	330,378	6,062	1,062	304,288	2,718	10,819	637	4,792
32	U. California, Davis	330,367	17,428	14,182	179,343	3,052	44,498	29,604	42,260
33	Case Western Reserve U.	329,320	13,633	4,179	289,152	3,833	17,273	0	1,250
34	U. Colorado Boulder	314,890	26,422	19,743	45,445	86,500	75,806	260	60,714
35	U. California, Berkeley	313,390	34,888	20,164	111,897	33,141	81,752	4,286	27,262
36	Texas A&M U., College Station and Health Science Center	311,920	24,983	26,555	72,572	7,745	101,256	29,444	49,365
37	Icahn School of Medicine at Mt. Sinai	300,667	3,367	0	294,811	210	747	0	1,532
38	Scripps Research Institute	292,268	3,110	845	257,844	652	3,306	0	26,511
39	U. Arizona	290,370	20,113	11,421	99,207	71,792	61,510	8,967	17,360
40	U. Florida	289,327	26,065	13,220	154,790	4,143	41,105	27,164	22,840
41	U. Utah	288,514	16,292	19,533	192,461	3,679	36,641	370	19,538
42	U. Colorado Denver and Anschutz Medical Campus	285,017	12,042	285	252,903	108	3,667	1,217	14,795
43	U. Chicago	281,464	12,751	8,744	196,756	4,627	52,231	324	6,031
44	U. Alabama, Birmingham	280,333	12,352	1,232	243,401	7,079	7,029	23	9,217
45	California Institute of Technology	279,515	30,390	27,237	68,383	57,859	89,407	300	5,939
46	U. Rochester	266,767	7,672	66,896	175,332	1,257	14,294	69	1,247
47	Baylor C. of Medicine	264,641	12,675	0	215,831	18,478	1,633	15,314	710
48	Michigan State U.	261,826	10,176	59,867	57,369	1,752	76,889	29,274	26,499
49	Boston U.	257,017	19,457	7,133	188,605	4,593	28,979	569	7,681
50	Oregon Health and Science U.	247,740	5,837	487	231,461	1,184	6,405	499	1,867
51	U. Cincinnati	245,086	8,180	1,874	220,249	480	9,238	125	4,940
52	Purdue U., West Lafayette	236,860	28,539	25,101	43,786	6,749	84,044	29,709	18,932
53	U. Iowa	235,527	12,449	2,247	185,170	9,945	14,062	911	10,743
54	U. Maryland Baltimore	224,802	15,891	98	204,939	347	1,922	183	1,422
55	U. South Florida, Tampa	222,790	10,924	2,173	141,232	2,070	12,631	143	53,617
56	Uniformed Services U. of the Health Sciences	213,389	113,098	740	99,511	0	0	0	40
57	Colorado State U., Fort Collins	212,054	44,721	12,743	42,545	7,649	33,345	31,220	39,831

Appendix O. Federally Financed Higher Education R&D Expenditures, Ranked by all federal R&D Expenditures, by Federal Agency: FY 2014 (Top 300 Institutions)

(Dollars in thousands)

Rank	Institution	All federal R&D expenditures	DOD	DOE	HHS	NASA	NSF	USDA	Other ^a
58	U. Hawaii, Manoa	206,810	47,219	10,432	48,697	16,196	34,771	13,094	36,401
59	U. Virginia, Charlottesville	205,865	25,538	10,468	124,919	3,144	23,190	45	18,561
60	Virginia Polytechnic Institute and State U.	204,308	42,559	14,538	39,069	2,815	38,002	18,580	48,745
61	U. Miami	203,751	26,437	2,055	130,316	3,980	15,454	92	25,417
62	U. Illinois, Chicago	203,733	7,250	4,665	153,073	834	17,375	515	20,021
63	Carnegie Mellon U.	198,247	65,897	12,353	28,330	4,135	68,462	0	19,070
64	Arizona State U.	196,270	32,759	16,607	57,575	24,220	50,705	1,480	12,924
65	SUNY, U. Buffalo	189,209	26,276	1,748	121,222	2,521	24,089	1,006	12,347
66	Yeshiva U.	186,885	1,827	232	183,935	34	786	66	5
67	U. Texas Southwestern Medical Center	185,137	4,942	148	173,356	4,530	975	0	1,186
68	U. Massachusetts, Medical School	183,582	5,400	0	176,816	0	252	0	1,114
69	U. California, Irvine	182,585	14,584	8,488	114,471	5,196	35,786	99	3,961
70	North Carolina State U.	181,449	18,968	14,333	18,029	1,711	46,684	19,526	62,198
71	Woods Hole Oceanographic Institution	177,616	29,049	319	1,537	4,159	121,195	0	21,357
72	U. Kansas	165,442	6,541	4,305	97,741	2,995	22,267	1,462	30,131
73	Princeton U.	164,277	31,889	17,486	44,593	7,652	55,462	423	6,772
74	U. Texas M. D. Anderson Cancer Center	158,986	7,388	0	150,956	158	297	0	187
75	U. New Mexico	153,889	21,033	9,892	82,175	3,294	30,113	484	6,898
76	Wake Forest U.	153,069	17,217	478	130,620	1,715	1,015	38	1,986
77	Florida State U.	151,701	17,449	8,252	21,433	2,357	57,511	791	43,908
78	Dartmouth C.	145,498	8,186	2,342	113,315	4,315	12,807	368	4,165
79	Oregon State U.	145,247	12,770	13,595	16,984	5,499	43,331	29,616	23,452
80	U. Connecticut	144,104	10,982	4,983	84,927	1,079	21,796	5,623	14,714
81	Indiana U.-Purdue U., Indianapolis	143,386	6,169	497	130,168	411	3,874	0	2,267
82	U. Kentucky	142,312	4,173	5,837	94,049	2,139	11,204	13,793	11,117
83	George Washington U.	141,552	6,461	2,383	109,028	1,077	9,524	530	12,549
84	Virginia Commonwealth U.	138,559	8,652	2,168	99,573	335	6,593	470	20,768
85	U. Texas Health Science Center, Houston	136,145	7,192	0	122,968	170	633	240	4,942
86	Brown U.	129,248	15,645	7,350	70,613	4,603	27,320	64	3,653
87	Washington State U.	126,955	8,671	11,427	20,754	280	17,376	34,009	34,438
88	Temple U.	126,803	7,663	1,793	99,413	422	11,010	1,029	5,473
89	U. Georgia	126,164	3,441	10,878	51,835	1,436	26,802	20,840	10,932
90	U. California, Santa Barbara	121,045	39,038	9,601	19,649	3,249	43,007	301	6,200
91	U. Oklahoma, Norman and Health Science Center	118,925	5,911	6,043	64,971	2,964	12,367	361	26,308
92	Medical U. South Carolina	118,649	7,313	4,046	99,166	111	320	0	7,693
93	U. Delaware	116,340	21,306	13,792	25,151	3,314	29,177	7,840	15,760
94	Iowa State U.	116,273	10,964	6,573	13,333	1,739	35,718	34,188	13,758
95	Tufts U.	116,204	6,458	1,512	65,084	638	14,505	14,657	13,350
96	Utah State U.	114,959	52,746	3,246	10,004	9,175	11,434	11,305	17,049
97	Wayne State U.	113,618	6,750	2,466	86,984	53	9,358	64	7,943
98	U. Tennessee, Knoxville	112,201	11,113	35,905	4,387	2,768	44,554	557	12,917
99	SUNY, Stony Brook U.	111,683	5,395	11,292	63,117	4,053	22,912	143	4,771
100	Medical C. Wisconsin	111,241	3,833	211	104,567	0	97	0	2,533
101	U. Massachusetts, Amherst	110,189	10,870	12,298	21,291	2,570	39,445	9,200	14,515
102	SUNY, U. Albany	105,333	1,296	439	88,162	823	5,270	171	9,172
103	U. Missouri, Columbia	104,910	9,200	5,690	46,602	679	16,438	17,706	8,595
104	U. Texas Medical Branch	101,761	7,051	503	89,636	2,595	366	6	1,604
105	U. New Hampshire	101,125	2,093	2,422	10,809	20,816	20,986	9,903	34,096
106	Georgetown U.	100,475	15,231	487	65,498	1,518	5,695	0	12,046
107	Naval Postgraduate School	96,573	87,005	747	0	621	5,583	0	2,617
108	Louisiana State U., Baton Rouge	94,701	5,185	6,255	38,381	3,091	19,956	10,173	11,660
109	Tulane U.	94,486	3,679	587	77,879	58	7,094	15	5,174
110	U. Nebraska, Lincoln	94,265	11,462	3,889	14,486	2,143	26,443	16,594	19,248
111	U. South Carolina, Columbia	91,890	7,792	11,355	44,913	1,337	16,041	1,100	9,352
112	U. California, Santa Cruz	90,858	2,205	3,784	25,054	30,388	19,838	1,066	8,523
113	U. Texas Health Science Center, San Antonio	89,303	9,570	0	75,958	233	34	0	3,508
114	U. Alaska, Fairbanks	85,904	6,129	4,974	4,796	16,862	25,853	2,990	24,300
115	Indiana U., Bloomington	84,592	6,348	8,492	29,758	2,170	31,077	551	6,196

Appendix O. Federally Financed Higher Education R&D Expenditures, Ranked by all federal R&D Expenditures, by Federal Agency: FY 2014 (Top 300 Institutions)

(Dollars in thousands)

Rank	Institution	All federal R&D expenditures	DOD	DOE	HHS	NASA	NSF	USDA	Other ^a
116	Rockefeller U.	81,820	10,031	255	70,564	13	957	0	0
117	New Mexico State U.	80,599	19,948	5,615	5,581	32,008	7,783	5,085	4,579
118	U. Vermont	79,743	2,780	636	56,586	1,750	9,684	5,207	3,100
119	U. Notre Dame	79,690	20,254	13,494	19,095	1,291	21,474	360	3,722
120	Northeastern U.	79,666	10,746	4,210	30,009	445	21,534	0	12,722
121	Florida International U.	78,961	3,893	4,182	21,496	939	15,083	1,467	31,901
122	Drexel U.	77,684	14,828	3,115	40,527	1,130	14,095	432	3,557
123	U. Nebraska, Medical Center	76,195	6,863	113	66,064	856	327	152	1,820
124	U. Alabama, Huntsville	75,343	49,941	864	303	19,158	3,201	682	1,194
125	U. Oregon	74,603	2,435	4,461	33,936	396	15,883	198	17,294
126	Rice U.	73,965	17,514	6,688	17,226	2,697	27,693	281	1,866
127	Montana State U., Bozeman	72,777	10,039	12,731	17,045	5,450	13,243	5,649	8,620
128	Mississippi State U.	71,715	10,677	9,557	4,320	1,167	9,338	18,926	17,730
129	U. Central Florida	70,716	23,289	7,059	13,880	5,803	11,737	93	8,855
130	West Virginia U.	69,165	3,279	11,045	24,798	4,594	10,533	8,100	6,816
131	Kansas State U.	67,438	4,795	4,953	9,318	582	15,173	23,797	8,820
132	U. Dayton	66,318	58,144	811	635	265	810	0	5,653
133	U. Louisville	65,849	4,834	655	51,828	324	4,388	31	3,789
134	U. Rhode Island	65,715	5,285	2,459	19,856	366	18,022	5,443	14,284
135	U. Mississippi and U. Mississippi, Jackson, Medical Center	64,218	7,260	1,613	40,335	1,588	4,625	5,184	3,613
136	George Mason U.	61,877	20,043	894	8,431	6,870	7,640	205	17,794
137	Rensselaer Polytechnic Institute	59,070	13,501	6,431	13,621	493	20,454	183	4,387
138	U. Houston	58,954	3,916	9,226	21,406	3,939	13,972	42	6,453
139	U. California, Riverside	57,397	4,685	4,767	15,527	608	22,092	5,370	4,348
140	U. Arkansas for Medical Sciences	55,556	620	0	53,098	0	0	0	1,838
141	Thomas Jefferson U.	54,676	2,128	0	51,481	12	356	21	678
142	New Jersey Institute of Technology	54,655	2,959	1,067	9,632	2,263	8,821	322	29,591
143	Rush U.	53,501	2,646	77	50,054	0	29	85	610
144	U. Nevada, Reno	53,363	2,990	8,248	19,939	667	6,959	4,130	10,430
145	U. Idaho	50,638	4,761	4,613	6,172	3,145	11,079	14,720	6,148
146	U. Maine	50,589	1,642	7,873	1,924	1,427	13,945	16,391	7,387
147	San Diego State U.	50,542	5,814	1,032	30,159	1,469	9,325	401	2,342
148	Auburn U., Auburn	50,088	7,501	2,110	7,975	1,841	9,465	10,289	10,907
149	Clemson U.	49,887	4,869	1,267	4,846	615	14,503	2,074	21,713
150	Georgia Regents U.□	47,771	1,616	12	45,559	0	549	0	35
151	U. Maryland, Baltimore County	47,538	7,583	28	13,478	14,917	8,380	462	2,690
152	Brandeis U.	47,532	753	1,377	33,052	0	7,530	0	4,820
153	Cleveland State U.	44,233	826	0	40,702	624	1,379	0	702
154	U. Wyoming	42,280	1,859	2,807	6,031	1,936	14,245	2,319	13,083
155	Georgia State U.	42,259	969	608	24,758	324	5,969	117	9,514
156	Cold Spring Harbor Laboratory	41,845	1,731	1,065	30,535	0	8,114	400	0
157	U. Tennessee, Health Science Center	41,830	1,382	155	39,834	0	146	34	279
158	Old Dominion U.	41,270	6,520	4,200	3,964	4,665	7,162	127	14,632
159	U. North Dakota	40,340	3,429	17,376	9,508	4,460	2,478	2,185	904
160	CUNY, City C.	40,095	3,349	2,470	11,609	2,009	12,245	85	8,328
161	Oklahoma State U., Stillwater	36,687	4,392	2,626	6,161	551	8,177	5,535	9,245
162	Florida A&M U.	36,570	2,056	859	5,921	167	2,458	7,243	17,866
163	North Dakota State U.	36,277	1,980	4,028	5,087	162	6,684	10,328	8,008
164	U. Texas, El Paso	35,304	4,641	1,888	8,667	1,467	9,271	790	8,580
165	Colorado School of Mines	34,781	5,173	14,063	1,821	1,094	10,671	146	1,813
166	U. Toledo	34,684	1,475	2,622	16,361	3,760	7,332	850	2,284
167	U.S. Air Force Academy	34,669	33,392	69	0	98	147	0	963
168	Louisiana State U., Health Sciences Center – New Orleans	34,637	337	0	33,939	0	227	0	134
169	Portland State U.	33,523	2,840	1,254	7,985	761	6,491	1,243	12,949
170	C. of William and Mary and Virginia Institute of Marine Science	33,320	2,677	2,207	1,571	1,222	7,835	102	17,706
171	New Mexico Institute of Mining and Technology	33,245	7,480	18,786	0	611	5,624	0	744
172	Texas Tech U.	33,137	5,912	2,705	2,757	969	7,517	3,301	9,976
173	Morehouse School of Medicine	33,020	150	0	32,349	117	261	0	143
174	San Jose State U.	32,901	208	110	825	17,311	3,065	113	11,269

Appendix O. Federally Financed Higher Education R&D Expenditures, Ranked by all federal R&D Expenditures, by Federal Agency: FY 2014 (Top 300 Institutions)

(Dollars in thousands)

Rank	Institution	All federal R&D expenditures	DOD	DOE	HHS	NASA	NSF	USDA	Other ^a
175	U. Texas, Dallas	32,699	8,968	2,185	8,899	1,824	9,347	26	1,450
176	Howard U.	32,663	3,876	537	17,365	495	6,734	40	3,616
177	Loyola U., Chicago	31,189	2,401	370	24,933	52	2,057	143	1,233
178	Michigan Technological U.	30,588	10,925	2,126	789	2,728	8,517	1,526	3,977
179	U. Montana, Missoula	30,319	1,635	128	9,587	2,528	6,774	5,748	3,919
180	U. Puerto Rico, Medical Sciences Campus	30,197	499	0	28,824	0	874	0	0
181	Saint Louis U.	30,071	1,416	0	24,412	412	1,375	24	2,432
182	South Dakota State U.	29,524	826	3,625	1,188	3,325	7,404	7,949	5,207
183	Syracuse U.	29,404	2,922	1,573	3,624	303	14,072	239	6,671
184	U. Massachusetts, Lowell	28,654	7,539	1,852	7,346	1,427	6,130	52	4,308
185	Eastern Virginia Medical School	28,532	121	0	4,816	480	15	0	23,100
186	Wright State U.	27,838	15,923	259	8,179	377	2,498	67	535
187	U. Massachusetts, Boston	27,715	749	303	9,680	763	5,692	63	10,465
188	U. Nevada, Las Vegas	26,950	1,437	8,761	5,062	710	4,868	994	5,118
189	U. Southern Mississippi	26,163	5,500	107	3,734	2,675	3,397	1,207	9,543
190	U. Alabama, Tuscaloosa	26,161	2,367	2,882	4,270	881	7,399	475	7,887
191	U. Arkansas, Fayetteville	26,111	1,220	623	2,131	575	9,730	10,182	1,650
192	SUNY, Health Science Center Brooklyn	25,802	1,254	23	24,525	0	0	0	0
193	Illinois Institute of Technology	25,679	3,640	6,938	9,274	140	4,098	258	1,331
194	U. Wisconsin-Milwaukee	25,377	1,447	1,690	8,069	303	9,354	699	3,815
195	Boston C.	25,115	4,639	1,086	9,420	360	5,469	0	4,141
196	U. Texas, Arlington	24,857	3,588	2,047	3,364	695	9,302	87	5,774
197	Brigham Young U., Provo	24,490	5,431	1,222	3,627	1,292	8,684	1,394	2,840
198	Lehigh U.	24,271	4,039	2,282	4,872	68	10,006	0	3,004
199	Stevens Institute of Technology	23,656	10,516	738	1,323	613	6,748	0	3,718
200	North Carolina Agricultural and Technical State U.	23,373	3,852	653	1,164	1,525	9,525	6,135	519
201	U. Texas, San Antonio	23,066	4,399	375	11,736	851	4,096	473	1,136
202	Alabama A&M U.	22,428	2,706	1,341	11,140	642	3,374	919	2,306
203	U. North Texas, Health Science Center	21,943	591	0	15,685	0	265	0	5,402
204	U. Memphis	21,898	3,663	209	4,842	118	4,995	82	7,989
205	Missouri U. of Science and Technology	21,811	3,079	4,050	644	864	4,669	115	8,390
206	Jackson State U.	21,677	1,924	143	8,319	84	5,986	25	5,196
207	SUNY, Upstate Medical U.	21,334	2,522	0	18,408	0	48	0	356
208	SUNY, Polytechnic Institute	21,208	2,659	13,395	1,938	83	1,800	0	1,333
209	Southern Methodist U.	20,611	11,901	2,352	2,108	6	2,333	20	1,891
210	U. Akron	20,263	7,931	1,015	1,968	1,337	5,502	0	2,510
211	Desert Research Institute	19,932	3,957	7,207	0	1,342	3,804	1,019	2,603
212	Mercer U.	19,666	17,835	0	1,730	35	15	0	51
213	Worcester Polytechnic Institute	19,643	6,510	1,084	2,182	88	7,047	82	2,650
214	Rochester Institute of Technology	19,465	2,967	1,030	1,486	2,351	9,177	77	2,377
215	Charles R. Drew U. of Medicine and Science	19,412	3,680	0	15,732	0	0	0	0
216	CUNY, Hunter C.	19,268	210	886	15,723	67	2,087	22	273
217	Loma Linda U.	19,088	3,332	186	13,617	1,930	7	4	12
218	U. North Carolina, Charlotte	19,069	3,260	516	3,800	61	6,975	257	4,200
219	U. Puerto Rico, Rio Piedras	18,262	951	869	7,799	1,145	6,165	500	833
220	Northern Arizona U.	18,209	2,549	407	4,369	976	3,241	2,502	4,165
221	Meharry Medical C.	17,754	527	0	17,199	0	0	0	28
222	East Carolina U.	17,409	1,401	74	9,542	333	1,347	64	4,648
223	Catholic U. of America	17,205	1,308	5,390	1,781	6,439	1,912	0	375
224	San Francisco State U.	17,129	723	635	7,938	499	4,303	157	2,874
225	Air Force Institute of Technology	16,782	16,070	138	0	0	37	0	537
226	Ohio U.	16,597	1,402	2,430	2,295	783	5,108	61	4,518
227	CUNY, Queens C.	16,460	839	8,440	3,903	0	2,597	0	681
228	U. North Texas, Denton	16,318	4,016	1,340	1,153	114	7,942	147	1,606
229	Southern Illinois U., Carbondale	16,288	1,909	427	7,951	14	2,953	986	2,048
230	Boise State U.	15,746	910	4,307	1,404	718	6,068	421	1,918
231	U. Tennessee, Knoxville, Institute of Agriculture	15,342	455	1,739	2,014	0	647	8,489	1,998
232	U. Missouri, Kansas City	15,178	1,449	571	11,395	265	1,078	31	389
233	U. of the Virgin Islands	14,992	0	29	3,018	41	2,312	3,387	6,205

Appendix O. Federally Financed Higher Education R&D Expenditures, Ranked by all federal R&D Expenditures, by Federal Agency: FY 2014 (Top 300 Institutions)

(Dollars in thousands)

Rank	Institution	All federal R&D expenditures	DOD	DOE	HHS	NASA	NSF	USDA	Other ^a
234	SUNY, Binghamton U.	14,843	3,264	1,215	5,250	42	3,268	0	1,804
235	U.S. Military Academy	14,819	14,819	0	0	0	0	0	0
236	U. South Alabama	14,353	377	62	10,204	207	1,310	91	2,102
237	U. Puerto Rico, Mayaguez	14,306	728	235	2,567	2	3,207	1,025	6,542
238	Texas State U.	14,243	574	350	3,141	126	3,469	1,193	5,390
239	U. Denver	14,202	688	242	5,340	433	3,912	7	3,580
240	Tuskegee U.	14,145	342	713	2,701	239	5,195	3,565	1,390
241	Morgan State U.	14,144	2,935	624	1,978	5,956	1,045	45	1,561
242	U. North Carolina, Greensboro	13,489	88	0	8,306	0	2,153	291	2,651
243	Florida Atlantic U.	13,234	1,901	1,156	5,791	121	1,292	23	2,950
244	U. Maryland, Center for Environmental Science	13,202	386	0	201	285	4,330	219	7,781
245	Embry-Riddle Aeronautical U.	13,030	353	4	0	401	1,522	0	10,750
246	Marshall U.	12,712	2,270	1,317	4,564	260	1,891	0	2,410
247	Rutgers, State U. New Jersey, Newark	12,520	646	428	5,530	0	4,471	22	1,423
248	Delaware State U.	12,464	1,234	201	4,126	1,675	2,178	2,286	764
249	U. South Dakota	12,162	704	814	7,240	218	2,597	0	589
250	Miami U.	12,048	824	470	3,597	27	5,750	15	1,365
251	Tennessee State U.	12,016	1,355	439	977	112	1,017	7,846	270
252	Creighton U.	11,690	838	251	9,096	65	890	62	488
253	U. West Florida	11,593	657	0	300	0	138	0	10,498
254	New York Medical C. Western Michigan U. and Homer Stryker M.D. School of Medicine	11,421	0	0	10,789	116	0	0	516
255	California State U., Northridge	11,334	142	1,498	1,154	333	4,293	159	3,755
256	Kent State U.	11,309	1,586	110	4,719	314	3,891	12	677
257	Hampton U.	11,181	721	1,446	3,284	65	3,524	141	2,000
258	Idaho State U.	11,153	2,088	1,198	1,160	2,823	3,099	21	764
259	U. Louisiana, Lafayette	11,091	581	4,625	1,539	79	3,373	16	878
260	U. California, Merced	10,666	375	337	4,574	309	2,168	128	2,775
261	Wichita State U.	10,509	423	896	2,568	54	5,391	541	636
262	U.S. Naval Academy	10,424	1,791	84	3,736	1,365	895	0	2,553
263	South Carolina State U.	10,416	8,692	240	0	578	906	0	0
264	Fayetteville State U.	10,306	1,179	604	5,145	342	1,647	288	1,101
265	Texas Tech U., Health Sciences Center	10,186	522	0	613	0	178	0	8,873
266	North Carolina Central U. Rosalind Franklin U. of Medicine and Science	9,853	899	0	8,194	16	364	0	380
267	Albany Medical C.	9,757	283	333	6,262	969	1,252	94	564
268	U. New Orleans	9,754	723	0	8,934	0	97	0	0
269	American U.	9,716	560	0	9,156	0	0	0	0
270	Northern Illinois U.	9,490	2,380	65	968	239	2,001	0	3,837
271	California Polytechnic State U., San Luis Obispo	9,427	214	0	2,404	800	970	330	4,709
272	U. Massachusetts, Dartmouth	9,174	2,209	2,017	1,339	103	1,931	161	1,414
273	Columbia U., Teachers C.	9,087	1,708	869	1,732	1,653	1,987	551	587
274	U. Maryland, Eastern Shore	8,909	250	0	1,923	0	1,275	450	5,011
275	Texas A&M U.-Kingsville	8,902	217	0	43	6	1,505	4,326	2,805
276	Florida Institute of Technology	8,678	30	0	1,080	0	1,141	2,052	4,375
277	Fisk U.	8,581	2,381	389	191	1,417	2,274	0	1,929
278	Louisiana State U., Medical Center, Shreveport	8,557	575	1,800	3,605	0	2,577	0	0
279	Claremont Graduate U.	8,490	347	0	7,943	90	87	23	0
280	Prairie View A&M U.	8,278	342	0	6,045	0	274	490	1,127
281	Marquette U.	8,278	481	1,123	108	247	1,100	5,219	0
282	Winthrop U.	8,191	275	2	3,985	88	2,063	0	1,778
283	California State U., Long Beach	7,955	0	0	5,115	0	353	367	2,120
284	U. Alaska, Anchorage	7,879	366	324	3,691	1,010	1,726	688	74
285	Louisiana Tech U.	7,824	28	231	2,529	95	2,288	61	2,592
286	National Defense U.	7,742	2,210	242	847	261	1,837	234	2,111
287	Alcorn State U.	7,682	7,682	0	0	0	0	0	0
288	Clark Atlanta U.	7,447	380	81	541	0	90	6,004	351
289	U. Texas Pan American	7,241	997	298	3,439	84	2,298	30	95
290	U. Texas Pan American	7,205	2,370	105	331	0	2,093	1,166	1,140

Appendix O. Federally Financed Higher Education R&D Expenditures, Ranked by all federal R&D Expenditures, by Federal Agency: FY 2014 (Top 300 Institutions)

(Dollars in thousands)

Rank	Institution	All federal R&D expenditures	DOD	DOE	HHS	NASA	NSF	USDA	Other ^a
292	Texas A&M U.-Corpus Christi	7,176	447	0	289	118	2,108	95	4,119
293	South Dakota School of Mines and Technology	7,078	1,684	377	2	1,915	2,817	130	153
293	Xavier U. Louisiana	7,078	1,499	149	4,048	9	1,316	0	57
295	Rhode Island C.	6,960	0	0	1,615	0	358	0	4,987
296	California State U., Fullerton	6,932	745	96	2,657	149	2,817	367	101
297	Morehouse C.	6,919	1,494	517	2,460	20	2,368	8	52
298	Dillard U.	6,889	396	0	5,848	14	335	0	296
299	Oakland U.	6,885	1,461	180	2,325	28	1,383	620	888
300	U. Guam	6,599	998	0	1,140	0	303	2,996	1,162

i = imputed.

DOD = Department of Defense; DOE = Department of Energy; HHS = Department of Health and Human Services; NASA = National Aeronautics and Space Administration; NSF = National Science Foundation; USDA = Department of Agriculture.

^a Includes all other agencies reported.

^b Johns Hopkins University includes Applied Physics Laboratory, with \$1,214,106 thousand in federally financed R&D expenditures in FY 2014.

NOTES: Institutions reporting zero federal expenditures for FY 2014 are not listed in this table. Tied institutions are ranked alphabetically. Institutions ranked are geographically separate campuses headed by a campus-level president or chancellor. Some campuses are part of large multi-campus universities; some are part of state university systems. For a complete listing of campuses that belong to a larger university or system and their aggregate R&D expenditures, see table 84.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, Higher Education Research and Development Survey, FY 2014.