



## Research and Development Expenditures at Colleges and Universities in Fiscal Year 1998

Many colleges and universities have missions to advance and apply knowledge through research and development (R & D). Expenditures for research and development are a common indicator of performance in this mission area. When aggregated to the state level, R & D expenditures can serve as a strategic indicator for a state's entire system of higher education.

### R & D expenditures

Each year the National Science Foundation (NSF) conducts a Survey of Research and Development Expenditures at Universities and Colleges. Final data from the fiscal year 1998 survey, the latest available, are used for this report.

NSF data indicate that U.S. colleges and universities expended \$25.7 billion for R & D in fiscal year 1998. Of that total, 60% of the funds came from the federal government and 20% came from institutional budgets. The remaining 20% came equally from state and local governments, industry and other sources.

### R & D expenditures in New York State

- In fiscal year 1998, New York's colleges and universities expended \$1.925 billion for R & D. (*Table 1*)
- Of that total, independent universities, led by Cornell University (\$363.5 million) and Columbia University (\$267.0 million) expended 74%. (*Table 1 and Figure 1*)
- SUNY institutions, led by Buffalo (\$151.7-million) and Stony Brook (\$141.8-million)

expended 23% of the statewide total. (*Table 1 and Figure 1*)

- CUNY, led by City College (\$21.1 million), expended the remaining 3% of statewide R & D funds. (*Table 1 and Figure 1*)

### How New York compares to other states

- With its colleges and universities spending more than \$1.9 billion on R & D in 1998, New York ranked second among the states, followed closely by Texas. California ranked first with \$3.4 billion, 1.8 times New York's total. (*Figure 2, Table 2*)
- The major R & D role played by independent institutions in New York is not unique among the top ten states. Other leading states, primarily in the northeast, have a similar pattern. (*Figure 2, Table 2*)
- New York receives a slightly larger share of federal research funds than its share of the population. This was true for six other top ten states. (*Figure 3, Table 2*)

### Conclusions and policy implications

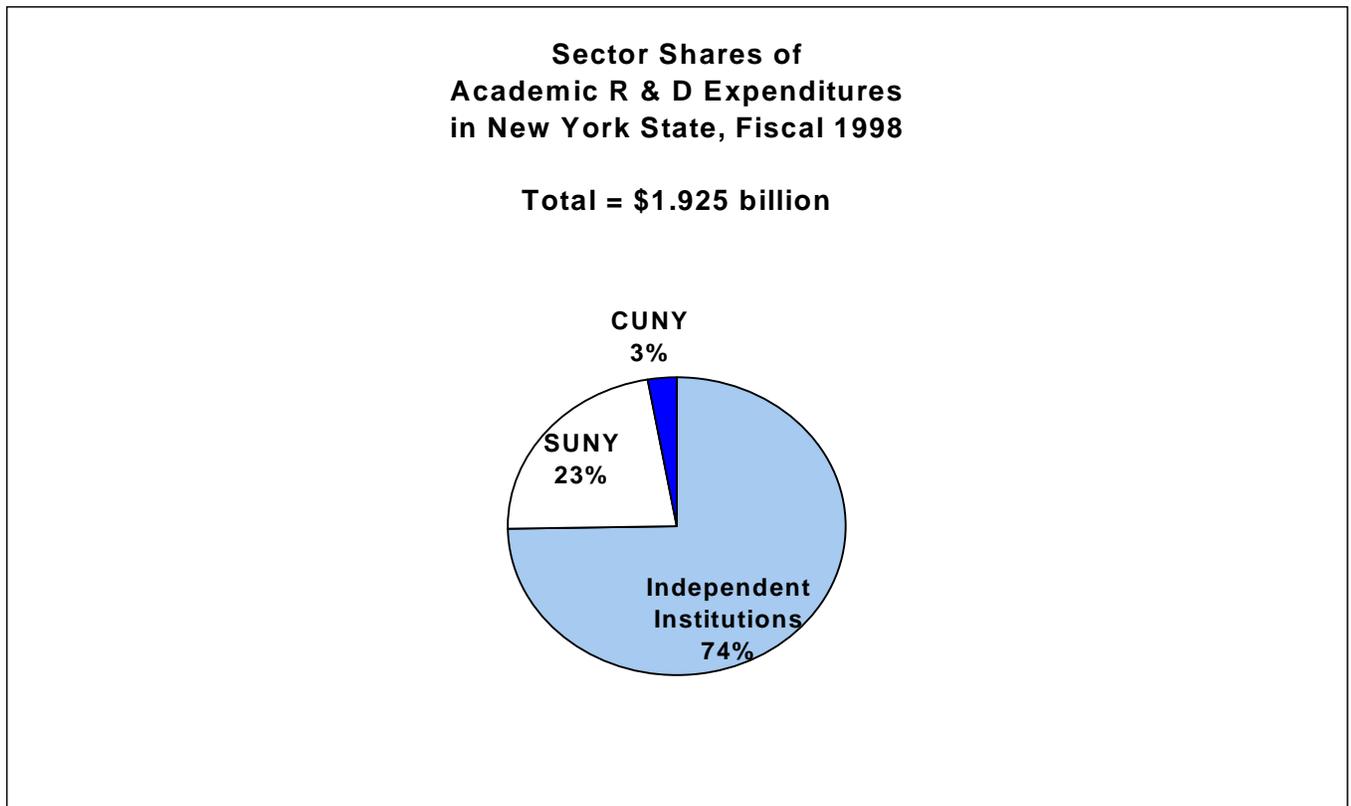
- **Record of success.** New York has a solid record of obtaining funds to support R & D. It ranks second in the nation and has a slightly larger share of nationwide academic R & D expenditures than its population share.
- **Public and private institutions contribute.** Although independent institutions dominate R & D in New York State, SUNY accounts for 23% of R & D expenditures and CUNY accounts for 3%.

- **Competitive pressures.** The NSF and others have reported that, although they have been a small source of R & D funds for colleges and universities, state governments are a growing source. States are investing to advance knowledge and to expand their economic growth. For example, California has recently announced a \$300 million state investment that will leverage nearly \$1 billion for R & D from federal and private sources over the next four years. Other states, such as Georgia, Michigan, Illinois, Ohio and Wisconsin have also committed state funds to R & D initiatives.

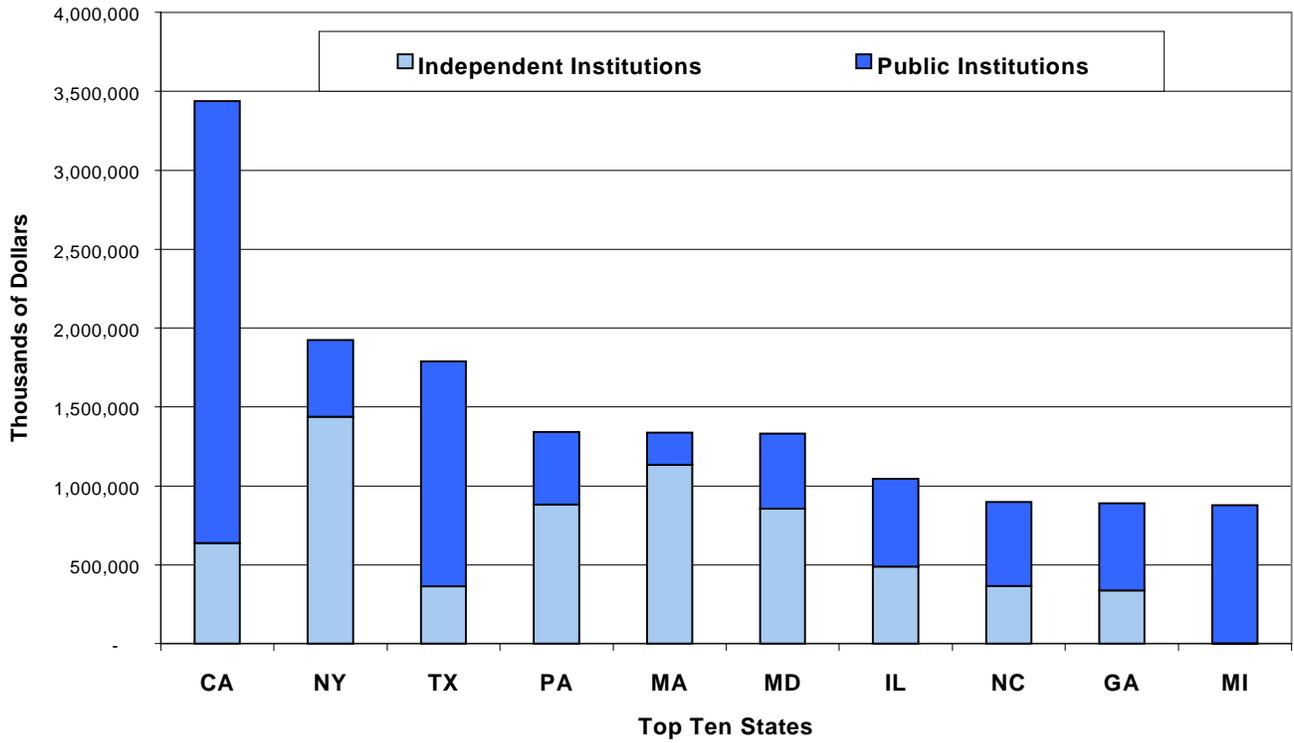
### Further information

Further information about R & D activity in New York and the U.S. can be found on the Internet.

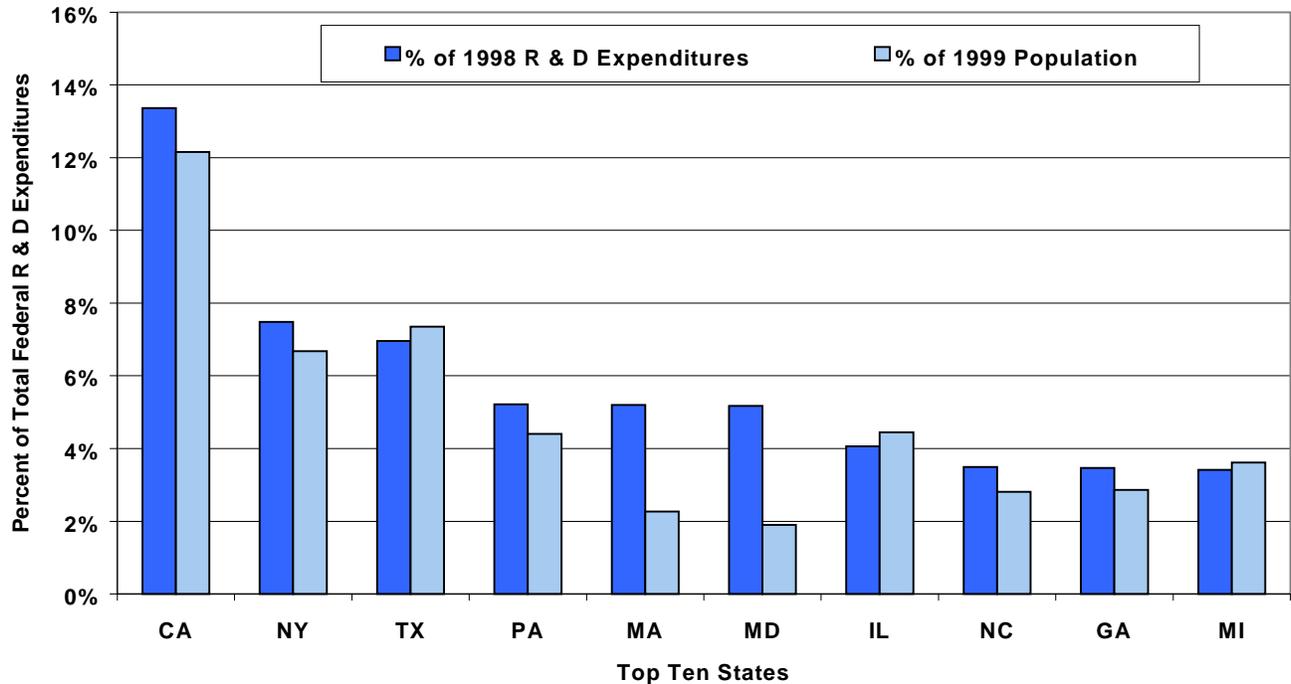
- The National Science Foundation, <http://www.nsf.gov>
- The SUNY Research Foundation, <http://www.rfsuny.org/>
- The CUNY Research Foundation, [www.rfcuny.org](http://www.rfcuny.org)
- The New York State Office of Science, Technology and Academic Research (NYSTAR), <http://www.nystar.state.ny.us/home.htm>.



**Figure 2**  
**Academic R & D Expenditures by State and Institutional Control**  
**in Fiscal Year 1998**



**Figure 3**  
**State Shares of 1998 Academic R & D Expenditures**  
**and 1999 Population**



**Table 1**  
**R & D Expenditures at New York State Universities and Colleges in Fiscal Year 1998**  
[dollars in thousands]

Institution & National Rank	R&D Expenditures	% of NY Total	Institution & National Rank	R&D Expenditures	% of NY Total
12 Cornell University <sup>2</sup>	363,511	18.89%	55 SUNY Buffalo	151,650	7.88%
26 Columbia University	267,007	13.87%	61 SUNY Stony Brook	141,766	7.37%
45 University of Rochester <sup>2</sup>	174,617	9.07%	129 SUNY Albany	50,568	2.63%
52 New York University	156,452	8.13%	159 SUNY Hlth Sci Ctr Brklyn	27,517	1.43%
80 The Rockefeller University	115,494	6.00%	172 SUNY Col Env Sci Frstry	22,036	1.14%
82 Mt Sinai School of Medicine	109,448	5.69%	181 SUNY Binghamton	20,754	1.08%
87 Yeshiva University	99,000	5.14%	210 SUNY Hlth Sci Ctr Syracuse	14,089	0.73%
143 Rensselaer Polytech Institute	38,560	2.00%	384 SUNY Col Buffalo	1,157	0.06%
146 Syracuse University	37,322	1.94%	386 SUNY Col Plattsburgh	1,133	0.06%
190 New York Medical College	19,159	1.00%	408 SUNY Col Old Westbury	777	0.04%
243 Albany Medical College	8,236	0.43%	413 SUNY Col Oswego	716	0.04%
245 Rochester Institute of Technology	8,133 e	0.42%	421 SUNY Col of Optometry	668	0.03%
254 Teachers College, Columbia	6,775	0.35%	427 SUNY Col Brockport	609	0.03%
259 Polytechnic University	6,373	0.33%	449 SUNY Col Geneseo	475	0.02%
260 Clarkson University	6,345	0.33%	503 SUNY Col Purchase	165	0.01%
268 Alfred University	5,275	0.27%	511 SUNY Col Fredonia	118	0.01%
293 New School University	3,705	0.19%	525 SUNY Col Cortland	55	0.00%
331 Fordham University	2,247	0.12%	<b>State University-Total</b>	<b>434,253</b>	<b>22.56%</b>
361 St John's University (NY)	1,572	0.08%			
364 Cooper Union	1,515 e	0.08%	177 CUNY City College	21,147	1.10%
365 Ithaca College	1,499	0.08%	213 CUNY Hunter College	13,497	0.70%
378 Long Island University	1,221	0.06%	272 CUNY Grad Sch & U Ctr	5,109	0.27%
382 Barnard College	1,172	0.06%	298 CUNY Queens College	3,353 e	0.17%
412 Hofstra University	717	0.04%	303 CUNY Brooklyn College	3,132	0.16%
416 Union College (NY)	694	0.04%	363 CUNY York College	1,526 i	0.08%
430 Pace University	596	0.03%	371 CUNY H H Lehman Col	1,334	0.07%
431 Vassar College	596 e	0.03%	372 CUNY Jay Col Crim Just	1,325	0.07%
436 Manhattan College	563	0.03%	392 CUNY Col Staten Island	1,014	0.05%
448 Hamilton College	475 e	0.02%	<b>City University-Total</b>	<b>51,437</b>	<b>2.67%</b>
482 New York Institute of Technology	295	0.02%			
491 Adelphi University	252	0.01%	<b>New York State-Total</b>	<b>1,924,667</b>	<b>100.00%</b>
505 Skidmore College	151	0.01%			
<b>Independent Sector-Total</b>	<b>1,438,977</b>	<b>74.76%</b>			

<sup>1</sup> Johns Hopkins University includes Applied Physics Laboratory, with \$443 million in total R&D expenditures.

<sup>2</sup> These data do not include R&D expenditures at university-associated federally funded research and development centers.

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available e = estimated i = imputed

DATA SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, FY1998

<http://www.nsf.gov/sbe/srs/nsf00330/tables/b32.xls>

SOURCE: NYSED-OHE-BIAE December 2000

**Table 2**  
**R & D Expenditures at Universities and Colleges by State and Institutional Control, with Related Indicators**

State	FY 1998 Research Expenditures [dollars in thousands]				% of U.S.	
	Institutional Control		Total	Rank	FY 1998 Research Expenditures	% of 1999 Population
	Independent	Public				
CA	636,279	2,801,246	3,437,525	1	13%	12%
NY	1,438,977	485,690	1,924,667	2	7%	7%
TX	364,100	1,426,253	1,790,353	3	7%	7%
PA	880,710	460,897	1,341,607	4	5%	4%
MA	1,133,993	203,817	1,337,810	5	5%	2%
MD	854,923	475,247	1,330,170	6	5%	2%
IL	487,960	556,000	1,043,960	7	4%	4%
NC	364,501	534,012	898,513	8	3%	3%
GA	337,749	552,608	890,357	9	3%	3%
MI	2,576	875,228	877,804	10	3%	4%
OH	229,743	578,467	808,210	11	3%	4%
FL	147,453	564,685	712,138	12	3%	6%
WI	64,488	471,287	535,775	13	2%	2%
WA	444	533,966	534,410	14	2%	2%
VA	33,294	457,401	490,695	15	2%	3%
CO	10,924	478,495	489,419	16	2%	1%
NJ	173,098	311,544	484,642	17	2%	3%
MO	297,887	186,272	484,159	18	2%	2%
AZ	21,500	405,999	427,499	19	2%	2%
IN	29,444	395,849	425,293	20	2%	2%
CT	269,213	134,748	403,961	21	2%	1%
MN	-	364,197	364,197	22	1%	2%
IA	748	357,511	358,259	23	1%	1%
AL	38,409	316,019	354,428	24	1%	2%
LA	93,421	258,555	351,976	25	1%	2%
TN	150,847	195,619	346,466	26	1%	2%
OR	22,137	287,611	309,748	27	1%	1%
UT	11,963	237,184	249,147	28	1%	1%
NM	-	245,535	245,535	29	1%	1%
DC	206,175	26,747	232,922	30	1%	0%
KS	-	213,096	213,096	31	1%	1%
KY	189	209,591	209,780	32	1%	1%
OK	8,300	200,573	208,873	33	1%	1%
NE	15,011	171,189	186,200	34	1%	1%
MS	1,497	151,186	152,683	35	1%	1%
HI	-	148,007	148,007	36	1%	0%
NH	69,866	52,359	122,225	37	0%	0%
AR	73	116,705	116,778	38	0%	1%
RI	74,039	37,940	111,979	39	0%	0%
PR	5,652	80,970	86,622	40	0%	0%
AK	-	75,854	75,854	41	0%	0%
DE	-	72,779	72,779	42	0%	0%
MT	-	72,425	72,425	43	0%	0%
ID	-	72,395	72,395	44	0%	0%
WV	752	62,694	63,446	45	0%	1%
SC	2,559	60,811	63,370	46	0%	1%
VT	-	57,832	57,832	47	0%	0%
ND	-	56,945	56,945	48	0%	0%
WY	-	48,500	48,500	49	0%	0%
NV	-	45,476	45,476	50	0%	1%
ME	1,545	33,720	35,265	51	0%	0%
SD	-	25,140	25,140	52	0%	0%
VI	-	5,134	5,134	53	0%	
GU	-	2,819	2,819	54	0%	
Grand Total	8,482,439	17,252,829	25,735,268	-	100%	100%

SOURCE: National Science Foundation. Analysis by NYSED-OHE-BIAE, December 2000.