



STATE R&D PROFILE

New York



Federal R&D to New York by Agency and Performer, Fiscal Year 2000

(obligations in millions of dollars)

Performers	Agencies							TOTAL
	HHS	DOE	DOD	NSF	NASA	USDA	other	
Federal Labs	9	1	139	0	12	25	5	192
Industry	52	271	374	6	28	0	14	745
Univs. / Colleges	1,006	64	63	209	41	19	17	1,419
FFRDCs *	11	292	1	0	1	0	0	305
Nonprofits	276	2	4	10	3	3	4	303
State / Local Govts.	76	0	0	1	0	0	0	78
Total New York	1,429	631	581	227	85	48	41	3,041
U.S. Total	18,577	6,872	33,010	2,930	9,714	1,830	2,818	75,751
NY % of U.S.	7.7%	9.2%	1.8%	7.7%	0.9%	2.6%	1.5%	4.0%

Source: National Science Foundation, *Federal Funds for Research and Development Fiscal Years 2000, 2001, and 2002*, 2002.

R&D data are for the 10 largest R&D supporting agencies only.

* Federally Funded Research and Development Centers. Government-owned, contractor-operated laboratories.

R&D = conduct of R&D and R&D plant (facilities and capital equipment).

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This AAAS State R&D Profile is one of a series of reports on the state and regional impacts of federal R&D, produced in cooperation with the AAAS Center for Science, Technology, and Congress from data provided by the National Science Foundation Division of Science Resources Statistics. More information on these reports, summary tables on R&D in the states, current profiles of the other states, and full-color, full-size versions of these charts are all available in the "State and Regional Reports" section of the AAAS R&D Web site (<http://www.aaas.org/spp/rd>). These profiles will be updated annually as new data become available.

AAAS State R&D Profiles – New York

- New York received \$3.0 billion in federal R&D in FY 2000, 4.0 percent of the national total, which gives it a ranking of 6th among the 50 states and the District of Columbia. The state is home to 19.0 million people, or 6.7 percent of the total U.S. population (3rd in rank). Its gross state product in 2000 was \$799 billion (8.0 percent of the national gross domestic product), second only to California as the country's largest state economy (Facts and Rankings).

- While prominent in absolute terms, New York ranks only 23rd in federal R&D per capita at \$160 per person, only 60 percent of the national average of \$269 per person.

- HHS is by far the largest federal supporter of R&D in New York, sending \$1.4 billion to the state in FY 2000. DOE comes in second at \$631 million (see Table 1 and Chart 1).

- Universities and colleges received nearly 47 percent of federal R&D funding to New York in FY 2000 (\$1.4 billion; see Table 1 and Chart 2). The top recipients of these funds were Columbia University (\$288 million) and Cornell University (\$241 million) (see Table 2 and Chart 3). These amounts placed Columbia and Cornell 11th and 18th, respectively, among top university recipients of federal R&D.

- The majority of federal funding at universities and colleges is provided by HHS, which directed \$1.0 billion to New York's higher education institutions (see Table 2 and Chart 3). Six New York universities each received more than \$100 million in R&D funds from HHS in FY 2000. Cornell and Columbia University ranked 4th and 9th, respectively, among the top university recipients of NSF funds.

- Cornell University and Columbia University are major research universities, ranked 14th and 25th, respectively, among colleges and universities in total R&D performed (see Table 3). In FY 2000, more than 85 percent of R&D performed at Columbia University was funded by federal sources.

- New York's second largest recipient of federal R&D funding is industry. DOD is the largest contributor (\$374 million in FY 2000) and DOE is the second largest (\$271 million; see Table 1). The largest performers of DOD-funded R&D are New York-based divisions of Northrop Grumman and Lockheed Martin. In 2000, total industry funding of R&D in New York was \$8.9 billion, nearly all of it spent in industrial laboratories (see Table 4). Including federal, industry, and all other funds, the total R&D effort in New York was \$13.6 billion in 2000, behind only California and Michigan in total R&D performed.

- New York is home to Brookhaven National Laboratory (BNL), a FFRDC on Long Island sponsored by DOE. Major research programs at BNL focus on nuclear and high-energy physics, the physics and chemistry of materials, environmental and energy research, nonproliferation, neurosciences and medical imaging and structural biology. Major research facilities housed at BNL include the Relativistic Heavy Ion Collider, the National Synchrotron Light Source, the Alternating Gradient Synchrotron and the Accelerator Test Facility. BNL received \$305 million in R&D funds in FY 2000, nearly all from DOE.

- New York's independent nonprofit research institutions received \$303 million in federal funds in FY 2000 (see Table 1 and Chart 2). The largest of these is the Memorial Sloan-Kettering Cancer Center in New York City, a research center devoted to the prevention, treatment and cure of cancer. At \$66 million, Sloan-Kettering ranked 13th among nonprofit research institutions nationwide in total federal R&D support in FY 2000. New York is also home to the Cold Spring Harbor Laboratory (CSHL; \$29 million) on Long Island. CSHL has research programs focusing on cancer, neurobiology, plant genetics, genomics and bioinformatics.

- Federal R&D funding to New York hovered around \$3 billion in today's dollars during the period FY 1970-2000, with notable peaks in the early 1970s and middle 1980s, largely in step with changes in DOD funding for R&D (see Chart 5). Additionally, though a large recipient of federal R&D dollars in absolute terms, New York has consistently received a smaller share of the federal R&D portfolio than its share of the U.S. population (see Chart 6).

Click on the charts to view or download full-size color PDF versions of these charts.

**Table 2. Federal R&D to New York Universities and Colleges,
Fiscal Year 2000**
(obligations in millions of dollars)

	HHS	NSF	DOD	DOE	NASA	USDA	other	TOTAL
Columbia U (11)	216	47	7	8	8	0	2	288
Cornell U (18)	118	75	19	4	5	18	2	241
U of Rochester (30)	101	7	5	36	1	0	2	153
NYU (42)	102	12	8	3	0	0	3	128
CUNY Mt Sinai (48)	115	0	2	0	1	0	1	119
Yeshiva U (51)	106	1	1	0	1	0	0	109
SUNY Stony Brook (67)	50	20	5	7	2	0	0	85
Rockefeller U (91)	56	1	0	1	0	0	0	58
SUNY Buffalo (107)	34	9	1	0	0	0	0	45
Rensselaer Polytech (139)	2	11	4	1	2	0	2	23
SUNY Health Brooklyn (146)	21	1	0	0	0	0	0	22
SUNY Albany (159)	7	2	0	1	1	0	5	17
NY Medical College (160)	16	0	1	0	0	0	0	17
Syracuse U (166)	5	5	3	1	0	0	1	16
SUNY Upstate Med. (179)	11	1	0	0	0	0	0	12
SUNY Cayuga Cty (187)	0	0	0	0	10	0	0	10
CUNY City College (192)	5	2	0	1	2	0	0	9
All Other	36	15	10	3	3	1	11	79
Total New York	1,001	210	68	66	38	20	29	1,431
U.S. Total	10,533	2,475	1,832	696	872	564	557	17,529
NY % of U.S.	9.5%	8.5%	3.7%	9.4%	4.4%	3.5%	5.3%	8.2%

Source: National Science Foundation, *Survey of Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions, Fiscal Year 2000*, 2002.

Figures may differ from other tables because of differing survey methods.

Figures in parentheses denote national rank among universities and colleges in federal R&D funds received.

R&D = conduct of R&D and R&D plant (facilities and capital equipment).

Table 3. Total R&D Expenditures at New York Universities and Colleges by Source of Funds, Fiscal Year 2000
(expenditures in millions of dollars)

	Federal	State/ Local	Industry	Institutional Funds	All Other	TOTAL R&D	Federal / Total R&D
Cornell U (14)	230	40	13	85	43	410	56.0%
Columbia U (25)	283	1	3	11	21	320	88.6%
U of Rochester (48)	151	10	18	7	12	197	76.3%
SUNY Buffalo (53)	96	7	6	49	30	188	51.4%
NYU (55)	117	2	8	24	31	182	64.3%
SUNY Stony Brook (63)	97	4	8	48	7	163	59.2%
CUNY Mt Sinai (72)	98	3	12	18	19	150	65.5%
Yeshiva U (78)	102	0	0	38	0	140	72.8%
Rockefeller U (86)	45	5	3	42	29	124	36.4%
SUNY Albany (109)	62	8	1	6	7	83	75.0%
Rensselaer Polytech (146)	26	6	7	2	1	41	62.7%
Syracuse U (147)	30	2	1	2	5	39	75.1%
All Other	139	15	23	44	32	254	54.9%
Total New York	1,475	103	101	375	237	2,291	64.4%
U.S. Total	17,493	2,204	2,178	5,924	2,262	30,062	58.2%
NY % of U.S.	8.4%	4.7%	4.6%	6.3%	10.5%	7.6%	

Source: National Science Foundation, *Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 2000*, 2002.

These data differ significantly from the federal R&D data for the following reasons:

1/ data are from performer surveys rather than funding sources; 2/ data are in expenditures rather than obligations; and 3/ R&D in this survey does not include R&D facilities.

Figures in parentheses denote national rank among universities and colleges in total R&D performed.

Facts and Rankings for New York

	NY		U.S.	NY % of U.S.	Rank *
Total Federal R&D	3,041 million \$ ('00)		75,751	4.0%	6
Population	18.99 million ('00)		282.13	6.7%	3
Federal R&D Per Capita	\$ 160 ('00)		\$ 269	59.5%	23
Total Federal Expenditures	110,333 million \$ ('00)		1,637,170	6.7%	2
Federal R&D / Total Federal	2.8% ('00)		4.6%		25
Total R&D (all funds)	13,556 million \$ ('00)		264,616	5.1%	3
Total R&D Per Capita	\$ 714 ('00)		\$ 938	76.1%	18
Gross State Product (GSP)	799,202 million \$ ('00)		9,941,552	8.0%	2
GSP Per Capita	\$ 42,087 ('00)		\$ 35,238	119.4%	7
R&D Intensity (R&D / GSP)	1.70% ('00)		2.66%	63.9%	24

Source: Federal R&D: National Science Foundation, *Federal Funds for Research and Development: Fiscal Years 2000, 2001, and 2002* and other data, 2002; Population: U.S. Bureau of the Census; Federal Expenditures: U.S. Bureau of the Census, *Federal Expenditures by State for Fiscal Year 2000, 2001*; GSP: U.S. Department of Commerce, Bureau of Economic Analysis.

* - Rank among 50 states and District of Columbia.

Table 4. Total R&D (all funding sources) in New York by Funding Source and Performer, 2000
(expenditures in millions of dollars)

Performers	Funding Sources					Total
	Federal Government	Industry	Univs./ Colleges	State / Local Government	Nonprofits	
Federal Labs	176	--	--	--	--	176
Industry	1,773	8,766	--	--	--	10,539
Universities / Colleges	1,475	101	375	103	237	2,291
FFRDCs*	249	--	--	--	--	249
Nonprofits	301	--	--	--	--	301
Total New York	3,974	8,867	375	103	237	13,556
U.S. Total	66,208	182,622	6,210	2,257	7,320	264,617
NY % of U.S.	6.0%	4.9%	6.0%	4.5%	3.2%	5.1%

Source: National Science Foundation, 2002.

* Federally Funded Research and Development Centers. Government-owned, contractor-operated laboratories. FFRDCs operated by universities/colleges and nonprofits only. Industry FFRDCs are included under industry.

Industry funding of nonprofit R&D is not included in state data, but is included in national totals.

Industry funding of industry R&D includes all non-federal funding of industry-performed R&D.

Nonprofit support for nonprofits is not included in state data, but is included in national totals.

Nonfederal support for FFRDCs and nonprofits are not included.

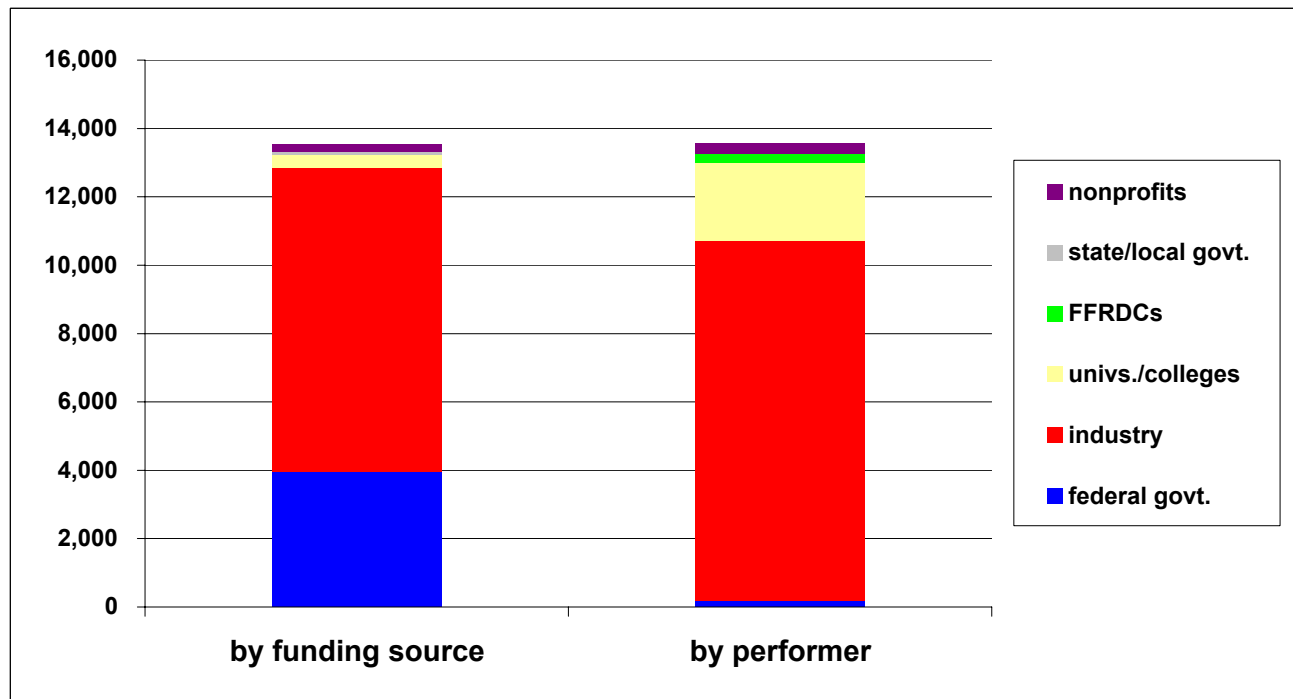
State and local government performance of R&D is not included.

Conduct of R&D only (R&D facilities and capital equipment excluded).

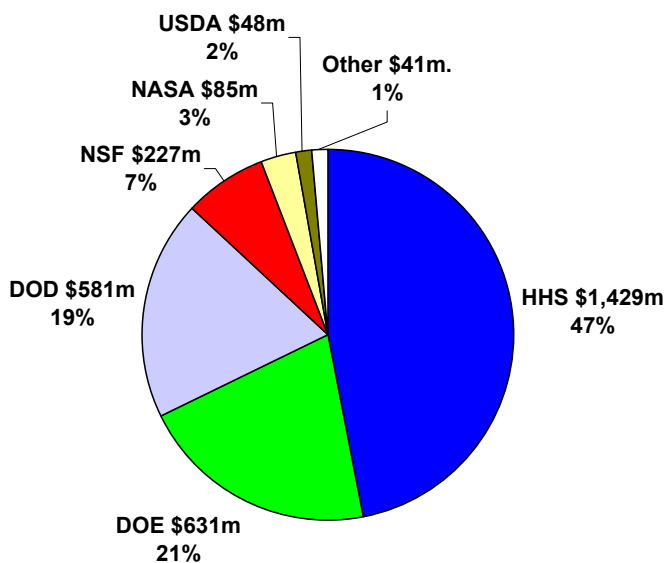
These data differ significantly from the federal R&D data for the following reasons:

1/ data are for calendar year 2000 rather than FY 2000; 2/ data are from performer surveys rather than funding sources; and 3/ data are in expenditures rather than obligations.

Chart. Total R&D in New York by Funding Source and by Performer, 2000
expenditures in millions of dollars



Federal R&D to New York by Agency
 FY 2000 (obligations in millions of dollars)
 Total: \$3.0 billion

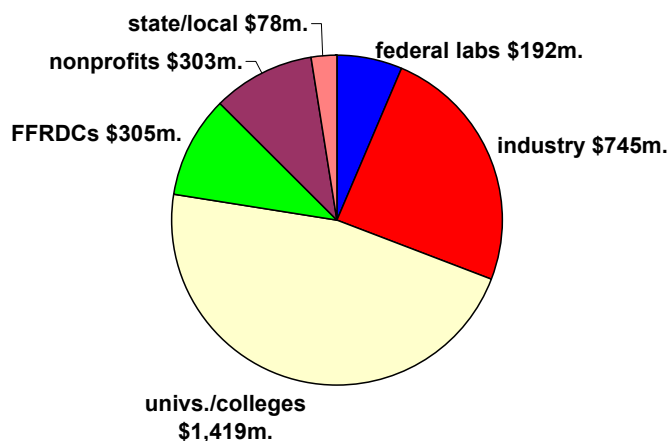


Source: National Science Foundation, Federal Funds for Research and Development, Fiscal Years 2000, 2001, and 2002, 2002.
 R&D = conduct of R&D and R&D plant.
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Chart 1.

Federal R&D to New York by Performer
 FY 2000 (obligations in millions of dollars)
 Total: \$3.0 billion

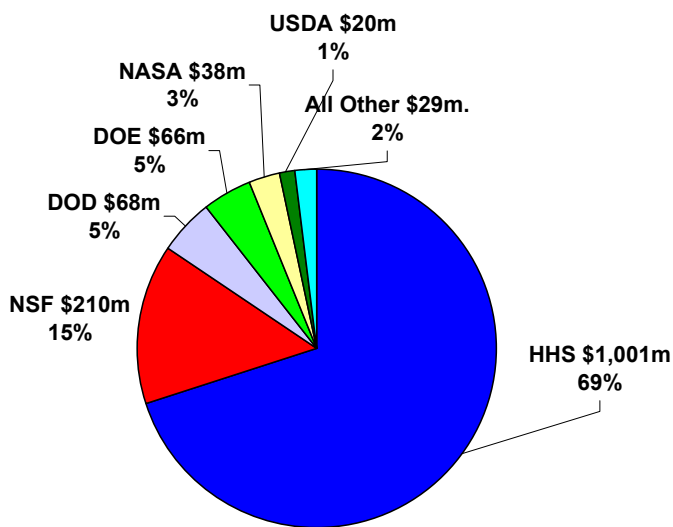


Source: National Science Foundation, Federal Funds for Research and Development, Fiscal Years 2000, 2001, and 2002, 2002.
 R&D = conduct of R&D and R&D plant.
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Chart 2.

Federal R&D to New York Universities and Colleges
 FY 2000 (obligations in millions of dollars)
 Total: \$1.4 billion

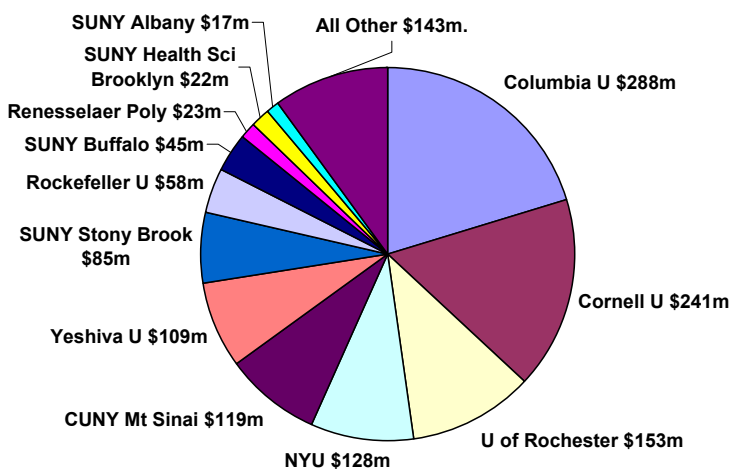


Source: National Science Foundation, *Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions, FY 2000, 2002.*
 R&D = conduct of R&D and R&D plant.
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Chart 3.

Federal R&D to New York Universities and Colleges
 FY 2000 (obligations in millions of dollars)
 Total: \$1.4 billion

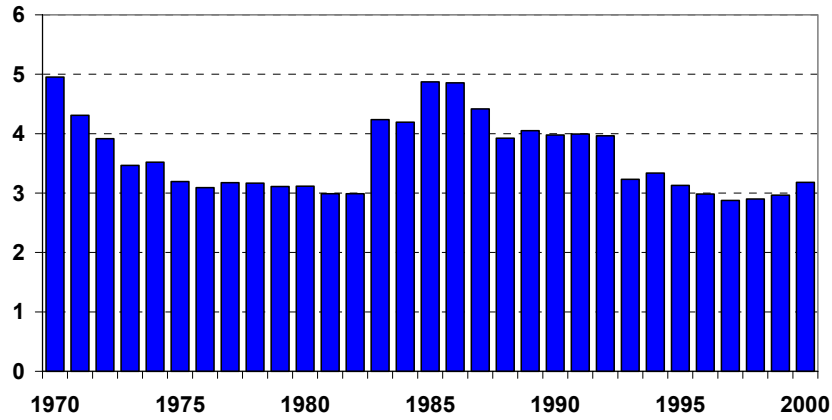


Source: National Science Foundation, *Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions, FY 2000, 2002.*
 R&D = conduct of R&D and R&D plant.
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Chart 4.

Federal R&D to New York, FY 1970-2000
(billions of constant FY 2002 dollars)

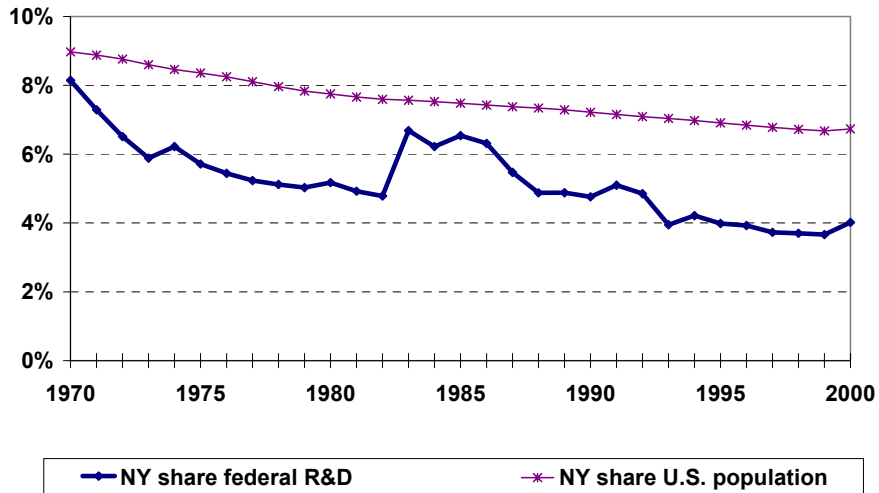


Source: National Science Foundation, Federal Funds for Research and Development Historical Tables, 2002.
R&D = conduct of R&D and R&D plant.
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Chart 5.

New York share of federal R&D, FY 1970-2000
(percent of total federal R&D)



Source: National Science Foundation, Federal Funds for Research and Development Historical Tables, 2002.
R&D = conduct of R&D and R&D plant.
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Chart 6.