TABLE 1. U.S. research and development expenditures, by performing sector and source of funds: 1994–2004

Year[e]	Performing sector:	Total	Federal	Industry			Industry FFRDCs[a]	U&C[b]						U&C FFRDCs	Other nonprofit institutions				Nonprofit FFRDCs[a]
	Funding sector:	Total	Federal	Total	Federal	Industry[c]	Total	Total	Federal	Other government[d]	Industry	U&C	Nonprofit	Total	Total	Federal	Industry	Nonprofit	Total
	Data column:[f]	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]
		Millions of current dollars																	
1994		169,198	16,355	117,392	20,261	97,131	2,202	21,598	12,991	1,622	1,456	3,937	1,594	5,294	5,599	2,911	617	2,071	758
1995		183,616	16,904	129,830	21,178	108,652	2,273	22,608	13,586	1,750	1,547	4,109	1,616	5,367	5,827	2,847	671	2,308	808
1996		197,336	16,585	142,371	21,356	121,015	2,297	23,708	14,077	1,860	1,671	4,434	1,666	5,395	6,209	2,906	730	2,574	772
1997		212,140	16,819	155,409	21,798	133,611	2,130	24,873	14,522	1,921	1,807	4,837	1,786	5,463	6,626	3,014	809	2,804	821
1998		227,651	17,362	168,409	22,086	146,323	2,078	26,166	15,164	1,971	1,949	5,161	1,921	5,559	7,234	3,281	888	3,065	843
1999		244,970	17,851	182,180	20,586	161,594	1,949	28,160	16,252	2,098	2,082	5,617	2,111	5,652	8,185	3,761	984	3,441	993
2000		267,207	17,917	200,007	17,163	182,844	1,955	30,683	17,710	2,247	2,175	6,227	2,326	5,742	9,437	4,447	1118	3,872	1,465
2001		277,326	20,426	202,017	16,899	185,118	2,020	33,712	19,767	2,397	2,188	6,820	2,540	6,225	10,734	5,289	1,132	4,313	2,192
2002		275,797	21,499	193,868	16,401	177,467	2,263	37,185	22,370	2,560	2,158	7,350	2,746	7,102	11,561	5,731	1,084	4,746	2,319
2003 preliminary		291,864	23,326	204,004	20,699	183,305	2,486	40,173	24,580	2,717	2,142	7,820	2,913	7,275	12,031	5,807	1,121	5,103	2,570
2004 preliminary		312,068	24,742	219,226	23,535	195,691	2,584	42,431	26,115	2,890	2,135	8,205	3,087	7,500	12,750	6,072	1,199	5,478	2,834
		[19]	[20]	[21]	[22]	[23]	[24]	[25]	[26]	[27]	[28]	[29]	[30]	[31]	[32]	[33]	[34]	[35]	[36]
		Millions of constant 2000 dollars																	
1994		187,460	18,120	130,062	22,448	107,614	2,440	23,929	14,393	1,797	1,613	4,362	1,765	5,865	6,203	3,225	683	2,294	840
1995		199,352	18,352	140,957	22,993	117,964	2,468	24,545	14,750	1,900	1,680	4,461	1,754	5,827	6,326	3,091	729	2,506	877
1996		210,262	17,671	151,696	22,755	128,941	2,447	25,260	14,999	1,982	1,780	4,724	1,775	5,748	6,616	3,096	778	2,742	822
1997		222,338	17,628	162,880	22,846	140,034	2,232	26,068	15,220	2,014	1,894	5,069	1,872	5,725	6,945	3,159	848	2,938	860
1998		235,977	17,997	174,568	22,894	151,674	2,154	27,123	15,719	2,043	2,020	5,350	1,991	5,763	7,499	3,401	921	3,177	874
1999		250,306	18,240	186,149	21,035	165,114	1,991	28,774	16,606	2,143	2,127	5,740	2,157	5,775	8,364	3,843	1,006	3,515	1,014
2000		267,207	17,917	200,007	17,163	182,844	1,955	30,683	17,710	2,247	2,175	6,227	2,326	5,742	9,437	4,447	1,118	3,872	1,465
2001		270,828	19,948	197,284	16,503	180,781	1,973	32,922	19,304	2,341	2,137	6,660	2,480	6,080	10,482	5,165	1,106	4,212	2,140
2002		264,956	20,654	186,248	15,756	170,492	2,174	35,723	21,491	2,460	2,073	7,061	2,638	6,823	11,107	5,506	1,041	4,560	2,228
2003 preliminary		275,348	22,006	192,460	19,528	172,932	2,345	37,900	23,189	2,563	2,021	7,378	2,749	6,863	11,350	5,478	1,057	4,815	2,425
2004 preliminary		288,419	22,867	202,613	21,752	180,861	2,388	39,216	24,136	2,671	1,973	7,583	2,853	6,932	11,783	5,612	1,108	5,063	2,620

FFRDC=federally funded research and development center; U&C=universities and colleges

[a] Beginning in 2001, data for industry and nonprofit FFRDCs are reported by FFRDCs. In prior years, these data were collected from FFRDC administrators and federal agencies supporting FFRDCs.

[b] Adjustments have been made to university research and development (R&D) for 1998 and later years to eliminate double counting of funds passed through from one academic institution to another. Data for 1998 and later years are not directly comparable with data for 1997 and earlier years. For fiscal year (FY) 1998, $479 million in passed-through funds were reported. For FY 2004, $1,207 million in passed-through funds are estimated.

[c] Industry sources of industry R&D expenditures include all non-Federal sources of industry R&D expenditures.

[d] Because of limitations in survey information, data on other government funding to other performers are not available and are consequently included in other sectors' support for their own R&D performance, e.g., other government support to nonprofits is included in nonprofit support for their own R&D.

[e] Expenditure levels for academic and federal government performers are calendar-year approximations based on FY data. For federal government expenditures, approximation is equal to 75% of amount reported in same FY plus 25% of amount reported in subsequent FY. For academic expenditures, respective percentages are 50 and 50, because those FYs generally begin on July 1 instead of October 1.

[f] See historical database, table D (http://www.nsf.gov/statistics/nsf06327/database.htm) for full series of historical data arranged in same data columns defined in this and other tables.

NOTE: Technical notes explaining methodological issues of measurement will be provided in National Science Foundation, *The Methodology Underlying the Measurement of R&D Expenditures: 2003* (Arlington, VA, forthcoming). Data are based on annual reports by performers except for nonprofit sector. For trend comparisons, use only historical data reported here. Do not use data published earlier.

SOURCES: Data were derived from National Science Foundation, Division of Science Resources Statistics (NSF/SRS), *Research and Development in Industry 2003* (Arlington, VA, forthcoming); NSF/SRS, *Academic Research and Development Expenditures: Fiscal Year 2003* (Arlington, VA, 2005); NSF/SRS, *Federal Funds for Research and Development: Fiscal Years 2003, 2004, and 2005* (Arlington, VA, forthcoming); and NSF/SRS, Survey of Research and Development Funding and Performance by Nonprofit Organizations: FY 1996–97.

TABLE 2. U.S. research and development expenditures, by source of funds and performing sector: 1994–2004

Year[f]	Funding sector:	Total	Federal								Industry				U&C	Nonprofit			Other government[a]
	Performing sector:	Total	Total	Federal	Industry	Industry FFRDCs[b,c]	U&C[d]	U&C FFRDCs[b]	Non-profit	Nonprofit FFRDCs[b,c]	Total	Industry[e]	U&C[d]	Nonprofit	U&C[d]	Total	Non-profit	U&C[d]	U&C[d]
	Data column:[g]	[1]	[37]	[2]	[4]	[6]	[8]	[13]	[15]	[18]	[38]	[5]	[10]	[16]	[11]	[39]	[17]	[12]	[9]
											Millions of current dollars								
1994		169,198	60,772	16,355	20,261	2,202	12,991	5,294	2,911	758	99,203	97,131	1,456	617	3,937	3,664	2,071	1,594	1,622
1995		183,616	62,963	16,904	21,178	2,273	13,586	5,367	2,847	808	110,870	108,652	1,547	671	4,109	3,924	2,308	1,616	1,750
1996		197,336	63,387	16,585	21,356	2,297	14,077	5,395	2,906	772	123,416	121,015	1,671	730	4,434	4,239	2,574	1,666	1,860
1997		212,140	64,566	16,819	21,798	2,130	14,522	5,463	3,014	821	136,227	133,611	1,807	809	4,837	4,590	2,804	1,786	1,921
1998		227,651	66,373	17,362	22,086	2,078	15,164	5,559	3,281	843	149,160	146,323	1,949	888	5,161	4,986	3,065	1,921	1,971
1999		244,970	67,043	17,851	20,586	1,949	16,252	5,652	3,761	993	164,660	161,594	2,082	984	5,617	5,552	3,441	2,111	2,098
2000		267,207	66,400	17,917	17,163	1,955	17,710	5,742	4,447	1,465	186,136	182,844	2,175	1,118	6,227	6,198	3,872	2,326	2,247
2001		277,326	72,819	20,426	16,899	2,020	19,767	6,225	5,289	2,192	188,438	185,118	2,188	1,132	6,820	6,853	4,313	2,540	2,397
2002		275,797	77,685	21,499	16,401	2,263	22,370	7,102	5,731	2,319	180,709	177,467	2,158	1,084	7,350	7,492	4,746	2,746	2,560
2003 preliminary		291,864	86,742	23,326	20,699	2,486	24,580	7,275	5,807	2,570	186,568	183,305	2,142	1,121	7,820	8,017	5,103	2,913	2,717
2004 preliminary		312,068	93,384	24,742	23,535	2,584	26,115	7,500	6,072	2,834	199,025	195,691	2,135	1,199	8,205	8,565	5,478	3,087	2,890
		[19]	[40]	[20]	[22]	[24]	[26]	[31]	[33]	[36]	[41]	[23]	[28]	[34]	[29]	[42]	[35]	[30]	[27]
											Millions of constant 2000 dollars								
1994		187,460	67,331	18,120	22,448	2,440	14,393	5,865	3,225	840	109,910	107,614	1,613	683	4,362	4,059	2,294	1,765	1,797
1995		199,352	68,359	18,352	22,993	2,468	14,750	5,827	3,091	877	120,372	117,964	1,680	729	4,461	4,261	2,506	1,754	1,900
1996		210,262	67,539	17,671	22,755	2,447	14,999	5,748	3,096	822	131,500	128,941	1,780	778	4,724	4,517	2,742	1,775	1,982
1997		222,338	67,670	17,628	22,846	2,232	15,220	5,725	3,159	860	142,776	140,034	1,894	848	5,069	4,810	2,938	1,872	2,014
1998		235,977	68,801	17,997	22,894	2,154	15,719	5,763	3,401	874	154,615	151,674	2,020	921	5,350	5,168	3,177	1,991	2,043
1999		250,306	68,504	18,240	21,035	1,991	16,606	5,775	3,843	1,014	168,247	165,114	2,127	1,006	5,740	5,673	3,515	2,157	2,143
2000		267,207	66,400	17,917	17,163	1,955	17,710	5,742	4,447	1,465	186,136	182,844	2,175	1,118	6,227	6,198	3,872	2,326	2,247
2001		270,828	71,112	19,948	16,503	1,973	19,304	6,080	5,165	2,140	184,023	180,781	2,137	1,106	6,660	6,692	4,212	2,480	2,341
2002		264,956	74,632	20,654	15,756	2,174	21,491	6,823	5,506	2,228	173,606	170,492	2,073	1,041	7,061	7,198	4,560	2,638	2,460
2003 preliminary		275,348	81,834	22,006	19,528	2,345	23,189	6,863	5,478	2,425	176,010	172,932	2,021	1,057	7,378	7,563	4,815	2,749	2,563
2004 preliminary		288,419	86,307	22,867	21,752	2,388	24,136	6,932	5,612	2,620	183,943	180,861	1,973	1,108	7,583	7,916	5,063	2,853	2,671

FFRDC=federally funded research and development center; U&C=universities and colleges

[a] Because of limitations in survey information, data on other government funding to other performers are not available and are consequently included in other sectors' support for their own research and development (R&D) performance. For example, other government support to nonprofits is included in nonprofits' support for their own R&D.

[b] Includes all R&D expenditures of FFRDCs.

[c] Beginning in 2001, data for industry and nonprofit FFRDCs are reported by FFRDCs. In prior years, data were collected from FFRDC administrators and federal agencies supporting FFRDCs.

[d] Adjustments have been made to university R&D for 1998 and later years to eliminate double counting of funds passed through from one academic institution to another. Data for 1998 and later years are not directly comparable with data for 1997 and earlier years. For fiscal year (FY) 1998, $479 million in passed-through funds were reported. For FY 2004, $1,207 million in passed-through through funds are estimated.

[e] Industry sources of industry R&D expenditures include all non-Federal sources of industry R&D expenditures.

[f] Expenditure levels for academic and federal government performers are calendar-year approximations based on FY data. For federal government expenditures, approximation is equal to 75% of amount reported in same FY plus 25% of amount reported in subsequent FY. For academic expenditures, the respective percentages are 50 and 50, because their FYs generally begin on July 1 instead of October 1.

[g] See historical database, table D (http://www.nsf.gov/statistics/nsf06327/database.htm) for full series of historical data arranged in same data columns defined in this and other tables.

NOTE: Technical notes explaining methodological issues of measurement will be provided in National Science Foundation, *The Methodology Underlying the Measurement of R&D Expenditures: 2003* (Arlington, VA, forthcoming). Data are based on annual reports by performers except for nonprofit sector. For trend comparisons, use only historical data reported here. Do not use data published earlier.

SOURCES: Data were derived from National Science Foundation, Division of Science Resources Statistics (NSF/SRS), *Research and Development in Industry 2003* (Arlington, VA, forthcoming); NSF/SRS, *Academic Research and Development Expenditures: Fiscal Year 2003* (Arlington, VA, 2005); NSF/SRS, *Federal Funds for Research and Development: Fiscal Years 2003, 2004, and 2005* (Arlington, VA, forthcoming); and NSF/SRS, Survey of Research and Development Funding and Performance by Nonprofit Organizations: FY 1996–97.

TABLE 3. U.S. basic research expenditures, by performing sector and source of funds: 1994–2004

Year[f]	Performing sector:	Total	Federal	Industry[a]			Industry FFRDCs[b]	U&C[c]						U&C FFRDCs	Other nonprofit institutions				Nonprofit FFRDCs[b]
	Funding sector:	Total	Federal	Total	Federal	Industry[d]	Total	Total	Federal	Other government[e]	Industry	U&C	Nonprofit	Total	Total	Federal	Industry	Nonprofit	Total
	Data column:[g]	[43]	[44]	[45]	[46]	[47]	[48]	[49]	[50]	[51]	[52]	[53]	[54]	[55]	[56]	[57]	[58]	[59]	[60]
		Millions of current dollars																	
1994		29,648	2,547	6,514	436	6,078	503	14,398	9,138	991	889	2,406	974	2,934	2,678	1,137	356	1,186	75
1995		29,607	2,689	5,569	190	5,379	530	15,144	9,633	1,069	945	2,510	987	2,702	2,899	1,170	390	1,338	75
1996		32,796	2,680	7,498	650	6,848	708	16,039	10,091	1,149	1,032	2,739	1,028	2,606	3,187	1,248	428	1,510	79
1997		36,910	2,746	9,795	1,029	8,766	625	17,643	10,915	1,248	1,175	3,144	1,161	2,671	3,322	1,317	449	1,557	108
1998		35,268	3,003	5,853	1,002	4,851	568	19,315	11,886	1,331	1,316	3,485	1,297	2,660	3,656	1,461	493	1,702	213
1999		38,830	3,347	6,669	1,132	5,537	533	20,929	12,790	1,434	1,423	3,840	1,443	2,765	4,191	1,734	546	1,910	397
2000		42,567	3,765	7,053	938	6,115	534	22,856	13,904	1,550	1,500	4,296	1,605	2,874	4,870	2,099	621	2,150	616
2001		47,553	4,260	8,053	754	7,299	552	25,181	15,507	1,663	1,518	4,731	1,762	3,104	5,488	2,464	629	2,395	915
2002		51,033	4,511	7,547	888	6,659	619	27,853	17,616	1,769	1,492	5,078	1,898	3,714	5,812	2,575	602	2,635	979
2003	preliminary	55,104	4,700	8,585	1,628	6,957	679	30,047	19,379	1,859	1,466	5,351	1,993	3,799	6,222	2,766	622	2,834	1,071
2004	preliminary	58,356	4,887	9,278	1,851	7,427	706	31,735	20,589	1,974	1,458	5,605	2,109	3,917	6,651	2,944	666	3,042	1,181
		[61]	[62]	[63]	[64]	[65]	[66]	[67]	[68]	[69]	[70]	[71]	[72]	[73]	[74]	[75]	[76]	[77]	[78]
		Millions of constant 2000 dollars																	
1994		32,848	2,822	7,217	483	6,734	557	15,951	10,124	1,098	985	2,666	1,079	3,251	2,967	1,259	394	1,314	83
1995		32,145	2,920	6,046	206	5,840	575	16,441	10,458	1,161	1,026	2,725	1,072	2,933	3,147	1,270	424	1,453	82
1996		34,944	2,855	7,989	693	7,297	754	17,089	10,751	1,224	1,100	2,918	1,096	2,776	3,396	1,330	457	1,609	84
1997		38,685	2,878	10,266	1,078	9,187	655	18,491	11,440	1,308	1,232	3,295	1,217	2,800	3,482	1,380	471	1,631	113
1998		36,557	3,112	6,067	1,039	5,028	589	20,022	12,321	1,380	1,364	3,612	1,344	2,757	3,790	1,514	511	1,764	221
1999		39,676	3,420	6,815	1,157	5,658	544	21,385	13,069	1,465	1,454	3,923	1,475	2,825	4,282	1,772	558	1,952	405
2000		42,567	3,765	7,053	938	6,115	534	22,856	13,904	1,550	1,500	4,296	1,605	2,874	4,870	2,099	621	2,150	616
2001		46,439	4,161	7,864	736	7,128	539	24,591	15,144	1,624	1,482	4,620	1,721	3,031	5,359	2,406	614	2,339	894
2002		49,027	4,333	7,250	853	6,397	594	26,758	16,924	1,700	1,433	4,879	1,823	3,568	5,583	2,474	578	2,532	941
2003	preliminary	51,985	4,434	8,099	1,536	6,563	641	28,347	18,282	1,754	1,383	5,048	1,881	3,584	5,870	2,609	587	2,673	1,010
2004	preliminary	53,934	4,517	8,575	1,711	6,864	653	29,330	19,029	1,825	1,348	5,180	1,949	3,620	6,147	2,721	615	2,811	1,092

FFRDC=federally funded research and development center; U&C=universities and colleges

[a] Character-of-work estimates for industry have been revised for 1998 and later years; hence these data are not directly comparable with data for 1997 and earlier years.

[b] Beginning in 2001, data for industry and nonprofit FFRDCs are reported by FFRDCs. In prior years, these data were collected from FFRDC administrators and federal agencies supporting FFRDCs.

[c] Adjustments have been made to university research and development (R&D) for 1998 and later years to eliminate double counting of funds passed through from one academic institution to another. Character-of-work estimation procedure for university and college R&D also was revised for 1998 and later years; hence these data are not directly comparable with data for 1997 and earlier years.

[d] Industry sources of industry R&D expenditures include all non-Federal sources of industry R&D expenditures.

[e] Because of limitations in survey information, data on other government funding to other performers are not available and are consequently included in other sectors' support for their own R&D performance. For example, other government support to nonprofits is included in nonprofits' support for their own R&D.

[f] Expenditure levels for academic and federal government performers are calendar-year approximations based on fiscal-year data. For federal government expenditures, approximation is equal to 75% of amount reported in same fiscal year (FY) plus 25% of amount reported in subsequent FY. For academic expenditures, respective percentages are 50 and 50, because their FYs generally begin on July 1 instead of October 1.

[g] See historical database, table D (http://www.nsf.gov/statistics/nsf06327/database.htm) for full series of historical data arranged in same data columns defined in this and other tables.

NOTES: Technical notes explaining methodological issues of measurement will be provided in National Science Foundation, *The Methodology Underlying the Measurement of R&D Expenditures: 2003* (Arlington, VA, forthcoming). Data are based on annual reports by performers except for nonprofit sector. For trend comparisons, use only historical data reported here. Do not use data published earlier.

SOURCES: Data were derived from National Science Foundation, Division of Science Resources Statistics (NSF/SRS), *Research and Development in Industry 2003* (Arlington, VA, forthcoming); NSF/SRS, *Academic Research and Development Expenditures: Fiscal Year 2003* (Arlington, VA, 2005); NSF/SRS, *Federal Funds for Research and Development: Fiscal Years 2003, 2004, and 2005* (Arlington, VA, forthcoming); and NSF/SRS, Survey of Research and Development Funding and Performance by Nonprofit Organizations: FY 1996–97.

TABLE 4. U.S. basic research expenditures, by source of funds and performing sector: 1994–2004

Year[f]	Funding sector:	Total	Federal								Industry				U&C	Nonprofit			Other government[a]
	Performing sector:	Total	Total	Federal	Industry	Industry FFRDCs[b,c]	U&C[d]	U&C FFRDCs[b]	Nonprofit	Nonprofit FFRDCs[b,c]	Total	Industry[e]	U&C[d]	Nonprofit	U&C[d]	Total	Nonprofit	U&C[d]	U&C[d]
	Data column:[g]	[43]	[79]	[44]	[46]	[48]	[50]	[55]	[57]	[60]	[80]	[47]	[52]	[58]	[53]	[81]	[59]	[54]	[51]
			Millions of current dollars																
1994		29,648	16,769	2,547	436	503	9,138	2,934	1,137	75	7,323	6,078	889	356	2,406	2,160	1,186	974	991
1995		29,607	16,989	2,689	190	530	9,633	2,702	1,170	75	6,714	5,379	945	390	2,510	2,326	1,338	987	1,069
1996		32,796	18,061	2,680	650	708	10,091	2,606	1,248	79	8,308	6,848	1,032	428	2,739	2,539	1,510	1,028	1,149
1997		36,910	19,411	2,746	1,029	625	10,915	2,671	1,317	108	10,390	8,766	1,175	449	3,144	2,718	1,557	1,161	1,248
1998		35,268	20,793	3,003	1,002	568	11,886	2,660	1,461	213	6,660	4,851	1,316	493	3,485	2,999	1,702	1,297	1,331
1999		38,830	22,697	3,347	1,132	533	12,790	2,765	1,734	397	7,506	5,537	1,423	546	3,840	3,354	1,910	1,443	1,434
2000		42,567	24,730	3,765	938	534	13,904	2,874	2,099	616	8,236	6,115	1,500	621	4,296	3,755	2,150	1,605	1,550
2001		47,553	27,557	4,260	754	552	15,507	3,104	2,464	915	9,445	7,299	1,518	629	4,731	4,157	2,395	1,762	1,663
2002		51,033	30,900	4,511	888	619	17,616	3,714	2,575	979	8,753	6,659	1,492	602	5,078	4,533	2,635	1,898	1,769
2003 preliminary		55,104	34,022	4,700	1,628	679	19,379	3,799	2,766	1,071	9,045	6,957	1,466	622	5,351	4,827	2,834	1,993	1,859
2004 preliminary		58,356	36,075	4,887	1,851	706	20,589	3,917	2,944	1,181	9,551	7,427	1,458	666	5,605	5,150	3,042	2,109	1,974
		[61]	[82]	[62]	[64]	[66]	[68]	[73]	[75]	[78]	[83]	[65]	[70]	[76]	[71]	[84]	[77]	[72]	[69]
			Millions of constant 2000 dollars																
1994		32,848	18,578	2,822	483	557	10,124	3,251	1,259	83	8,113	6,734	985	394	2,666	2,393	1,314	1,079	1,098
1995		32,145	18,445	2,920	206	575	10,458	2,933	1,270	82	7,290	5,840	1,026	424	2,725	2,525	1,453	1,072	1,161
1996		34,944	19,244	2,855	693	754	10,751	2,776	1,330	84	8,853	7,297	1,100	457	2,918	2,705	1,609	1,096	1,224
1997		38,685	20,344	2,878	1,078	655	11,440	2,800	1,380	113	10,890	9,187	1,232	471	3,295	2,849	1,631	1,217	1,308
1998		36,557	21,553	3,112	1,039	589	12,321	2,757	1,514	221	6,904	5,028	1,364	511	3,612	3,109	1,764	1,344	1,380
1999		39,676	23,191	3,420	1,157	544	13,069	2,825	1,772	405	7,670	5,658	1,454	558	3,923	3,427	1,952	1,475	1,465
2000		42,567	24,730	3,765	938	534	13,904	2,874	2,099	616	8,236	6,115	1,500	621	4,296	3,755	2,150	1,605	1,550
2001		46,439	26,912	4,161	736	539	15,144	3,031	2,406	894	9,224	7,128	1,482	614	4,620	4,059	2,339	1,721	1,624
2002		49,027	29,686	4,333	853	594	16,924	3,568	2,474	941	8,408	6,397	1,433	578	4,879	4,355	2,532	1,823	1,700
2003 preliminary		51,985	32,097	4,434	1,536	641	18,282	3,584	2,609	1,010	8,533	6,563	1,383	587	5,048	4,554	2,673	1,881	1,754
2004 preliminary		53,934	33,342	4,517	1,711	653	19,029	3,620	2,721	1,092	8,827	6,864	1,348	615	5,180	4,760	2,811	1,949	1,825

FFRDC=federally funded research and development center; U&C=universities and colleges

[a] Because of limitations in survey information, data on other government funding to other performers are not available and are consequently included in other sectors' support for their own research and development (R&D) performance. For example, other government support to nonprofits is included in nonprofits' support for their own R&D.

[b] Includes all R&D expenditures of FFRDCs.

[c] Beginning in 2001, data for industry and nonprofit FFRDCs are reported by FFRDCs. In prior years, data were collected from FFRDC administrators and federal agencies supporting FFRDCs

[d] Adjustments have been made to university R&D for 1998 and later years to eliminate double counting of funds passed through from one academic institution to another. Character-of-work estimation procedure for university and college R&D also was revised for 1998 and later years; hence these data are not directly comparable with data for 1997 and earlier years.

[e] Industry sources of industry R&D expenditures include all non-Federal sources of industry R&D expenditures. Character-of-work estimates for industry have been revised for 1998 and later years; hence these data are not directly comparable with data for 1997 and earlier years.

[f] Expenditure levels for academic and federal government performers are calendar-year approximations based on fiscal-year data. For federal government expenditures, approximation is equal to 75% of amount reported in same fiscal year (FY) plus 25% of amount reported in subsequent FY. For academic expenditures, the respective percentages are 50 and 50, because their FYs generally begin on July 1 instead of October 1.

[g] See historical database, table D (http://www.nsf.gov/statistics/nsf06327/database.htm) for full series of historical data arranged in same data columns defined in this and other tables.

NOTES: Technical notes explaining methodological issues of measurement will be provided in National Science Foundation, *The Methodology Underlying the Measurement of R&D Expenditures: 2003* (Arlington, VA, forthcoming). Data are based on annual reports by performers except for nonprofit sector. For trend comparisons, use only historical data reported here. Do not use data published earlier.

SOURCES: Data were derived from National Science Foundation, Division of Science Resources Statistics (NSF/SRS), *Research and Development in Industry 2003* (Arlington, VA, forthcoming); NSF/SRS, *Academic Research and Development Expenditures: Fiscal Year 2003* (Arlington, VA, 2005); NSF/SRS, *Federal Funds for Research and Development: Fiscal Years 2003, 2004, and 2005* (Arlington, VA, forthcoming); and NSF/SRS, Survey of Research and Development Funding and Performance by Nonprofit Organizations: FY 1996–97.

TABLE 5. U.S. applied research expenditures, by performing sector and source of funds: 1994–2004

Year[f]	Performing sector:	Total	Federal	Industry[a]			Industry FFRDCs[b]	U&C[c]						U&C FFRDCs	Other nonprofit institutions				Nonprofit FFRDCs[b]
	Funding sector:	Total	Federal	Total	Federal	Industry[d]	Total	Total	Federal	Other government[e]	Industry	U&C	Nonprofit	Total	Total	Federal	Industry	Nonprofit	Total
	Data column:[g]	[85]	[86]	[87]	[88]	[89]	[90]	[91]	[92]	[93]	[94]	[95]	[96]	[97]	[98]	[99]	[100]	[101]	[102]
		Millions of current dollars																	
1994		36,614	4,985	22,988	3,616	19,372	503	5,386	2,641	517	464	1,256	508	982	1,659	960	158	541	111
1995		40,931	4,952	26,919	3,164	23,755	535	5,654	2,775	558	494	1,311	516	1,050	1,692	934	170	589	129
1996		43,165	4,872	29,010	3,640	25,370	231	5,879	2,860	583	524	1,390	522	1,270	1,781	960	182	640	122
1997		46,553	4,997	32,430	2,648	29,782	213	5,522	2,551	552	518	1,388	512	1,337	1,926	1,011	205	711	128
1998		46,361	5,146	32,208	2,632	29,576	230	5,221	2,291	525	519	1,374	512	1,372	2,062	1,060	225	777	123
1999		52,083	5,530	36,638	2,817	33,821	274	5,839	2,749	544	540	1,458	548	1,251	2,421	1,300	249	872	130
2000		56,844	6,105	39,170	2,676	36,494	275	6,652	3,354	571	553	1,583	591	1,329	3,096	1,831	283	981	217
2001		64,605	7,052	44,012	3,603	40,409	935	7,260	3,757	602	550	1,713	638	1,485	3,530	2,150	287	1,093	332
2002		50,787	7,487	28,533	2,452	26,081	1,048	7,980	4,227	649	547	1,863	696	1,685	3,744	2,267	275	1,203	309
2003	preliminary	62,084	7,939	38,076	5,182	32,894	1,200	8,686	4,648	704	555	2,025	754	1,721	4,095	2,518	284	1,293	367
2004	preliminary	66,364	8,407	41,009	5,892	35,117	1,268	9,223	4,983	751	555	2,132	802	1,806	4,287	2,595	304	1,388	365
		[103]	[104]	[105]	[106]	[107]	[108]	[109]	[110]	[111]	[112]	[113]	[114]	[115]	[116]	[117]	[118]	[119]	[120]
		Millions of constant 2000 dollars																	
1994		40,565	5,523	25,469	4,006	21,463	557	5,967	2,926	573	514	1,391	563	1,087	1,838	1,063	176	599	123
1995		44,439	5,377	29,226	3,435	25,791	581	6,139	3,013	606	536	1,423	560	1,140	1,837	1,014	184	639	140
1996		45,992	5,191	30,910	3,878	27,032	246	6,264	3,047	622	558	1,481	557	1,353	1,898	1,022	193	682	130
1997		48,791	5,237	33,989	2,775	31,214	223	5,787	2,673	579	543	1,455	537	1,402	2,019	1,059	215	745	135
1998		48,057	5,334	33,386	2,728	30,658	238	5,412	2,375	544	538	1,425	530	1,422	2,137	1,099	233	805	128
1999		53,218	5,650	37,436	2,878	34,558	280	5,967	2,809	556	552	1,490	560	1,278	2,474	1,328	255	891	132
2000		56,844	6,105	39,170	2,676	36,494	275	6,652	3,354	571	553	1,583	591	1,329	3,096	1,831	283	981	217
2001		63,091	6,887	42,981	3,519	39,462	913	7,089	3,669	588	537	1,673	623	1,450	3,447	2,100	280	1,067	324
2002		48,791	7,193	27,411	2,356	25,056	1,006	7,667	4,060	623	525	1,790	669	1,619	3,597	2,178	264	1,156	297
2003	preliminary	58,570	7,490	35,921	4,889	31,033	1,132	8,194	4,385	664	523	1,911	712	1,624	3,863	2,375	268	1,220	346
2004	preliminary	61,335	7,770	37,901	5,446	32,455	1,172	8,524	4,606	694	513	1,970	741	1,669	3,962	2,398	281	1,283	337

FFRDC=federally funded research and development center; U&C=universities and colleges

[a] Character-of-work estimates for industry have been revised for 1998 and later years; hence these data are not directly comparable with data for 1997 and earlier years.

[b] Beginning in 2001, data for industry and nonprofit FFRDCs are reported by FFRDCs. In prior years, these data were collected from FFRDC administrators and federal agencies supporting FFRDCs.

[c] Adjustments have been made to university research and development (R&D) for 1998 and later years to eliminate double counting of funds passed through from one academic institution to another. Character-of-work estimation procedure for university and college R&D also was revised for 1998 and later years; hence these data are not directly comparable with data for 1997 and earlier years.

[d] Industry sources of industry R&D expenditures include all non-Federal sources of industry R&D expenditures.

[e] Because of limitations in survey information, data on other government funding to other performers are not available and are consequently included in other sectors' support for their own R&D performance. For example, other government support to nonprofits is included in nonprofits' support for their own R&D.

[f] Expenditure levels for academic and federal government performers are calendar-year approximations based on fiscal-year data. For federal government expenditures, approximation is equal to 75% of amount reported in same fiscal year (FY) plus 25% of amount reported in subsequent FY. For academic expenditures, respective percentages are 50 and 50, because their FYs generally begin on July 1 instead of October 1.

[g] See historical database, table D (http://www.nsf.gov/statistics/nsf06327/database.htm) for full series of historical data arranged in same data columns defined in this and other tables.

NOTES: Technical notes explaining methodological issues of measurement will be provided in National Science Foundation, *The Methodology Underlying the Measurement of R&D Expenditures: 2003* (Arlington, VA, forthcoming). Data are based on annual reports by performers except for nonprofit sector. For trend comparisons, use only historical data reported here. Do not use data published earlier.

SOURCES: Data were derived from National Science Foundation, Division of Science Resources Statistics (NSF/SRS), *Research and Development in Industry 2003* (Arlington, VA, forthcoming); NSF/SRS, *Academic Research and Development Expenditures: Fiscal Year 2003* (Arlington, VA, 2005); NSF/SRS, *Federal Funds for Research and Development: Fiscal Years 2003, 2004, and 2005* (Arlington, VA, forthcoming); and NSF/SRS, Survey of Research and Development Funding and Performance by Nonprofit Organizations: FY 1996–97.

TABLE 6. U.S. applied research expenditures, by source of funds and performing sectors: 1994–2004

Year[f]	Funding sector:	Total	Federal								Industry				U&C	Nonprofits			Other government[a]
	Performing sector:	Total	Total	Federal	Industry	Industry FFRDCs[b,c]	U&C[d]	U&C FFRDCs[b]	Nonprofit	Nonprofit FFRDCs[b,c]	Total	Industry[e]	U&C[d]	Nonprofit	U&C[d]	Total	Nonprofit	U&C[d]	U&C[d]
	Data column:[g]	[85]	[121]	[86]	[88]	[90]	[92]	[97]	[99]	[102]	[122]	[89]	[94]	[100]	[95]	[123]	[101]	[96]	[93]
											Millions of current dollars								
1994		36,614	13,797	4,985	3,616	503	2,641	982	960	111	19,995	19,372	464	158	1,256	1,049	541	508	517
1995		40,931	13,540	4,952	3,164	535	2,775	1,050	934	129	24,418	23,755	494	170	1,311	1,104	589	516	558
1996		43,165	13,954	4,872	3,640	231	2,860	1,270	960	122	26,076	25,370	524	182	1,390	1,162	640	522	583
1997		46,553	12,885	4,997	2,648	213	2,551	1,337	1,011	128	30,505	29,782	518	205	1,388	1,223	711	512	552
1998		46,361	12,853	5,146	2,632	230	2,291	1,372	1,060	123	30,320	29,576	519	225	1,374	1,288	777	512	525
1999		52,083	14,050	5,530	2,817	274	2,749	1,251	1,300	130	34,611	33,821	540	249	1,458	1,420	872	548	544
2000		56,844	15,787	6,105	2,676	275	3,354	1,329	1,831	217	37,330	36,494	553	283	1,583	1,573	981	591	571
2001		64,605	19,314	7,052	3,603	935	3,757	1,485	2,150	332	41,246	40,409	550	287	1,713	1,731	1,093	638	602
2002		50,787	19,474	7,487	2,452	1,048	4,227	1,685	2,267	309	26,902	26,081	547	275	1,863	1,899	1,203	696	649
2003 preliminary		62,084	23,575	7,939	5,182	1,200	4,648	1,721	2,518	367	33,733	32,894	555	284	2,025	2,048	1,293	754	704
2004 preliminary		66,364	25,315	8,407	5,892	1,268	4,983	1,806	2,595	365	35,975	35,117	555	304	2,132	2,190	1,388	802	751
		[103]	[124]	[104]	[106]	[108]	[110]	[115]	[117]	[120]	[125]	[107]	[112]	[118]	[113]	[126]	[119]	[114]	[111]
											Millions of constant 2000 dollars								
1994		40,565	15,286	5,523	4,006	557	2,926	1,087	1,063	123	22,153	21,463	514	176	1,391	1,162	599	563	573
1995		44,439	14,700	5,377	3,435	581	3,013	1,140	1,014	140	26,511	25,791	536	184	1,423	1,199	639	560	606
1996		45,992	14,868	5,191	3,878	246	3,047	1,353	1,022	130	27,784	27,032	558	193	1,481	1,239	682	557	622
1997		48,791	13,504	5,237	2,775	223	2,673	1,402	1,059	135	31,972	31,214	543	215	1,455	1,281	745	537	579
1998		48,057	13,323	5,334	2,728	238	2,375	1,422	1,099	128	31,429	30,658	538	233	1,425	1,335	805	530	544
1999		53,218	14,356	5,650	2,878	280	2,809	1,278	1,328	132	35,365	34,558	552	255	1,490	1,451	891	560	556
2000		56,844	15,787	6,105	2,676	275	3,354	1,329	1,831	217	37,330	36,494	553	283	1,583	1,573	981	591	571
2001		63,091	18,861	6,887	3,519	913	3,669	1,450	2,100	324	40,279	39,462	537	280	1,673	1,690	1,067	623	588
2002		48,791	18,709	7,193	2,356	1,006	4,060	1,619	2,178	297	25,845	25,056	525	264	1,790	1,824	1,156	669	623
2003 preliminary		58,570	22,240	7,490	4,889	1,132	4,385	1,624	2,375	346	31,824	31,033	523	268	1,911	1,932	1,220	712	664
2004 preliminary		61,335	23,397	7,770	5,446	1,172	4,606	1,669	2,398	337	33,249	32,455	513	281	1,970	2,024	1,283	741	694

FFRDC=federally funded research and development center; U&C=universities and colleges

[a] Because of limitations in survey information, data on other government funding to other performers are not available and are consequently included in other sectors' support for their own research and development (R&D) performance. For example, other government support to nonprofits is included in nonprofits' support for their own R&D.

[b] Includes all R&D expenditures of FFRDCs.

[c] Beginning in 2001, data for industry and nonprofit FFRDCs are reported by FFRDCs. In prior years, data were collected from FFRDC administrators and federal agencies supporting FFRDCs.

[d] Adjustments have been made to university R&D for 1998 and later years to eliminate double counting of funds passed through from one academic institution to another. Character-of-work estimation procedure for university and college R&D also was revised for 1998 and later years; hence these data are not directly comparable with data for 1997 and earlier years.

[e] Industry sources of industry R&D expenditures include all non-Federal sources of industry R&D expenditures. Character-of-work estimates for industry have been revised for 1998 and later years; hence these data are not directly comparable with data for 1997 and earlier years.

[f] Expenditure levels for academic and federal government performers are calendar-year approximations based on fiscal-year data. For federal government expenditures, approximation is equal to 75% of amount reported in same fiscal year (FY) plus 25% of amount reported in subsequent FY. For academic expenditures, the respective percentages are 50 and 50, because their FYs generally begin on July 1 instead of October 1.

[g] See historical database, table D (http://www.nsf.gov/statistics/nsf06327/database.htm) for full series of historical data arranged in same data columns defined in this and other tables.

NOTES: Technical notes explaining methodological issues of measurement will be provided in National Science Foundation, *The Methodology Underlying the Measurement of R&D Expenditures: 2003* (Arlington, VA, forthcoming). Data are based on annual reports by performers except for nonprofit sector. For trend comparisons, use only historical data reported here. Do not use data published earlier.

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TABLE 7. U.S. development expenditures, by performing sector and source of funds: 1994–2004

Year[f]	Performing sector:	Total	Federal	Industry[a]			Industry FFRDCs[b]	U&C[c]						U&C FFRDCs	Other nonprofit institutions				Nonprofit FFRDCs[b]
	Funding sector:	Total	Federal	Total	Federal	Industry[d]	Total	Total	Federal	Other government[e]	Industry	U&C	Nonprofit	Total	Total	Federal	Industry	Nonprofit	Total
	Data column:[g]	[127]	[128]	[129]	[130]	[131]	[132]	[133]	[134]	[135]	[136]	[137]	[138]	[139]	[140]	[141]	[142]	[143]	[144]
		Millions of current dollars																	
1994		102,936	8,823	87,890	16,209	71,681	1,196	1,815	1,212	114	102	276	112	1,378	1,261	815	103	343	573
1995		113,077	9,262	97,342	17,824	79,518	1,208	1,810	1,178	123	108	288	113	1,616	1,236	744	111	381	603
1996		121,375	9,033	105,863	17,066	88,797	1,358	1,790	1,127	128	115	305	115	1,520	1,241	698	120	423	571
1997		128,677	9,077	113,184	18,121	95,063	1,292	1,708	1,056	121	114	305	112	1,454	1,378	687	155	536	585
1998		146,023	9,214	130,348	18,452	111,896	1,280	1,630	987	115	114	302	112	1,527	1,516	760	170	586	507
1999		154,055	8,974	138,873	16,637	122,236	1,142	1,391	713	120	119	320	120	1,636	1,572	726	188	658	467
2000		167,792	8,047	153,784	13,549	140,235	1,146	1,176	452	125	121	347	130	1,539	1,468	513	214	741	632
2001		165,168	9,114	149,952	12,542	137,410	534	1,271	502	132	121	376	140	1,637	1,716	675	217	825	945
2002		173,977	9,501	157,788	13,061	144,727	597	1,351	527	142	120	409	153	1,703	2,005	890	207	908	1,031
2003	preliminary	174,677	10,686	157,343	13,889	143,454	607	1,440	553	154	122	445	166	1,754	1,714	523	214	976	1,133
2004	preliminary	187,349	11,447	168,939	15,792	153,147	610	1,474	543	165	122	468	176	1,778	1,812	534	229	1,048	1,288
		[145]	[146]	[147]	[148]	[149]	[150]	[151]	[152]	[153]	[154]	[155]	[156]	[157]	[158]	[159]	[160]	[161]	[162]
		Millions of constant 2000 dollars																	
1994		114,046	9,776	97,376	17,958	79,418	1,325	2,010	1,343	126	113	305	124	1,527	1,397	903	114	381	634
1995		122,768	10,056	105,684	19,352	86,333	1,312	1,965	1,279	133	118	312	123	1,754	1,342	807	121	414	655
1996		129,325	9,625	112,797	18,184	94,613	1,447	1,907	1,201	136	123	325	122	1,619	1,322	743	128	451	608
1997		134,862	9,513	118,625	18,992	99,633	1,354	1,790	1,106	127	119	319	118	1,524	1,444	720	162	562	613
1998		151,363	9,551	135,115	19,127	115,988	1,327	1,690	1,023	119	118	313	116	1,583	1,572	788	176	608	526
1999		157,411	9,170	141,898	16,999	124,899	1,167	1,422	728	122	121	327	123	1,672	1,606	742	192	673	477
2000		167,792	8,047	153,784	13,549	140,235	1,146	1,176	452	125	121	347	130	1,539	1,468	513	214	741	632
2001		161,298	8,900	146,439	12,248	134,190	521	1,241	490	129	118	367	137	1,598	1,676	659	212	806	923
2002		167,138	9,128	151,586	12,548	139,038	573	1,298	507	137	115	393	147	1,636	1,926	855	199	872	990
2003	preliminary	164,792	10,082	148,439	13,103	135,336	572	1,358	522	146	115	419	156	1,655	1,617	494	202	921	1,069
2004	preliminary	173,151	10,580	156,137	14,595	141,542	564	1,362	502	152	113	433	163	1,643	1,674	494	212	969	1,191

FFRDC=federally funded research and development center; U&C=universities and colleges

[a] Character-of-work estimates for industry have been revised for 1998 and later years; hence these data are not directly comparable with data for 1997 and earlier years.

[b] Beginning in 2001, data for industry and nonprofit FFRDCs are reported by FFRDCs. In prior years, these data were collected from FFRDC administrators and federal agencies supporting FFRDCs.

[c] Adjustments have been made to university research and development (R&D) for 1998 and later years to eliminate double counting of funds passed through from one academic institution to another. Character-of-work estimation procedure for university and college R&D also was revised for 1998 and later years; hence these data are not directly comparable with data for 1997 and earlier years.

[d] Industry sources of industry R&D expenditures include all non-Federal sources of industry R&D expenditures.

[e] Because of limitations in survey information, data on other government funding to other performers are not available and are consequently included in other sectors' support for their own R&D performance. For example, other government support to nonprofits is included in nonprofits' support for their own R&D.

[f] Expenditure levels for academic and federal government performers are calendar-year approximations based on fiscal-year data. For federal government expenditures, approximation is equal to 75% of amount reported in same fiscal year (FY) plus 25% of amount reported in subsequent FY. For academic expenditures, respective percentages are 50 and 50, because their FYs generally begin on July 1 instead of October 1.

[g] See historical database, table D (http://www.nsf.gov/statistics/nsf06327/database.htm) for full series of historical data arranged in same data columns defined in this and other tables.

NOTES: Technical notes explaining methodological issues of measurement will be provided in National Science Foundation, *The Methodology Underlying the Measurement of R&D Expenditures: 2003* (Arlington, VA, forthcoming). Data are based on annual reports by performers except for nonprofit sector. For trend comparisons, use only historical data reported here. Do not use data published earlier.

SOURCES: Data were derived from National Science Foundation, Division of Science Resources Statistics (NSF/SRS), *Research and Development in Industry 2003* (Arlington, VA, forthcoming); NSF/SRS, *Academic Research and Development Expenditures: Fiscal Year 2003* (Arlington, VA, 2005); NSF/SRS, *Federal Funds for Research and Development: Fiscal Years 2003, 2004, and 2005* (Arlington, VA, forthcoming); and NSF/SRS, Survey of Research and Development Funding and Performance by Nonprofit Organizations: FY 1996–97.

TABLE 8. U.S. development expenditures, by source of funds and performing sector: 1994–2004

Year[f]	Funding sector:	Total	Federal								Industry				U&C	Nonprofit			Other government[a]
	Performing sector:	Total	Total	Federal	Industry	Industry FFRDCs[b,c]	U&C[d]	U&C FFRDCs[b]	Nonprofit	Nonprofit FFRDCs[b,c]	Total	Industry[e]	U&C[d]	Nonprofit	U&C[d]	Total	Nonprofit	U&C[d]	U&C[d]
	Data column:[g]	[127]	[163]	[128]	[130]	[132]	[134]	[139]	[141]	[144]	[164]	[131]	[136]	[142]	[137]	[165]	[143]	[138]	[135]
										Millions of current dollars									
1994		102,936	30,206	8,823	16,209	1,196	1,212	1,378	815	573	71,886	71,681	102	103	276	455	343	112	114
1995		113,077	32,435	9,262	17,824	1,208	1,178	1,616	744	603	79,738	79,518	108	111	288	495	381	113	123
1996		121,375	31,372	9,033	17,066	1,358	1,127	1,520	698	571	89,032	88,797	115	120	305	538	423	115	128
1997		128,677	32,270	9,077	18,121	1,292	1,056	1,454	687	585	95,332	95,063	114	155	305	649	536	112	121
1998		146,023	32,728	9,214	18,452	1,280	987	1,527	760	507	112,179	111,896	114	170	302	699	586	112	115
1999		154,055	30,294	8,974	16,637	1,142	713	1,636	726	467	122,543	122,236	119	188	320	778	658	120	120
2000		167,792	25,878	8,047	13,549	1,146	452	1,539	513	632	140,570	140,235	121	214	347	871	741	130	125
2001		165,168	25,947	9,114	12,542	534	502	1,637	675	945	137,747	137,410	121	217	376	965	825	140	132
2002		173,977	27,310	9,501	13,061	597	527	1,703	890	1,031	145,054	144,727	120	207	409	1,061	908	153	142
2003 preliminary		174,677	29,146	10,686	13,889	607	553	1,754	523	1,133	143,790	143,454	122	214	445	1,142	976	166	154
2004 preliminary		187,349	31,993	11,447	15,792	610	543	1,778	534	1,288	153,498	153,147	122	229	468	1,224	1,048	176	165
		[145]	[166]	[146]	[148]	[150]	[152]	[157]	[159]	[162]	[167]	[149]	[154]	[160]	[155]	[168]	[161]	[156]	[153]
										Millions of constant 2000 dollars									
1994		114,046	33,466	9,776	17,958	1,325	1,343	1,527	903	634	79,644	79,418	113	114	305	504	381	124	126
1995		122,768	35,214	10,056	19,352	1,312	1,279	1,754	807	655	86,571	86,333	118	121	312	537	414	123	133
1996		129,325	33,427	9,625	18,184	1,447	1,201	1,619	743	608	94,864	94,613	123	128	325	573	451	122	136
1997		134,862	33,822	9,513	18,992	1,354	1,106	1,524	720	613	99,914	99,633	119	162	319	680	562	118	127
1998		151,363	33,924	9,551	19,127	1,327	1,023	1,583	788	526	116,282	115,988	118	176	313	724	608	116	119
1999		157,411	30,954	9,170	16,999	1,167	728	1,672	742	477	125,212	124,899	121	192	327	795	673	123	122
2000		167,792	25,878	8,047	13,549	1,146	452	1,539	513	632	140,570	140,235	121	214	347	871	741	130	125
2001		161,298	25,339	8,900	12,248	521	490	1,598	659	923	134,520	134,190	118	212	367	943	806	137	129
2002		167,138	26,237	9,128	12,548	573	507	1,636	855	990	139,353	139,038	115	199	393	1,019	872	147	137
2003 preliminary		164,792	27,496	10,082	13,103	572	522	1,655	494	1,069	135,653	135,336	115	202	419	1,077	921	156	146
2004 preliminary		173,151	29,569	10,580	14,595	564	502	1,643	494	1,191	141,866	141,542	113	212	433	1,131	969	163	152

FFRDC=federally funded research and development center; U&C=universities and colleges

[a] Because of limitations in survey information, data on other government funding to other performers are not available and are consequently included in other sectors' support for their own research and development (R&D) performance. For example, other government support to nonprofits is included in nonprofits' support for their own R&D.

[b] Includes all R&D expenditures of FFRDCs.

[c] Beginning in 2001, data for industry and nonprofit FFRDCs are reported by FFRDCs. In prior years, data were collected from FFRDC administrators and federal agencies supporting FFRDCs.

[d] Adjustments have been made to university R&D for 1998 and later years to eliminate double counting of funds passed through from one academic institution to another. Character-of-work estimation procedure for university and college R&D also was revised for 1998 and later years; hence these data are not directly comparable with data for 1997 and earlier years.

[e] Industry sources of industry R&D expenditures include all non-Federal sources of industry R&D expenditures. Character-of-work estimates for industry have been revised for 1998 and later years; hence these data are not directly comparable with data for 1997 and earlier years.

[f] Expenditure levels for academic and federal government performers are calendar-year approximations based on fiscal-year data. For federal government expenditures, approximation is equal to 75% of amount reported in same fiscal year (FY) plus 25% of amount reported in subsequent FY. For academic expenditures, the respective percentages are 50 and 50, because their FYs generally begin on July 1 instead of October 1.

[g] See historical database, table D (http://www.nsf.gov/statistics/nsf06327/database.htm) for full series of historical data arranged in same data columns defined in this and other tables.

NOTES: Technical notes explaining methodological issues of measurement will be provided in National Science Foundation, *The Methodology Underlying the Measurement of R&D Expenditures: 2003* (Arlington, VA, forthcoming). Data are based on annual reports by performers except for nonprofit sector. For trend comparisons, use only historical data reported here. Do not use data published earlier.

SOURCES: Data were derived from National Science Foundation, Division of Science Resources Statistics (NSF/SRS), *Research and Development in Industry 2003* (Arlington, VA, forthcoming); NSF/SRS, *Academic Research and Development Expenditures: Fiscal Year 2003* (Arlington, VA, 2005); NSF/SRS, *Federal Funds for Research and Development: Fiscal Years 2003, 2004, and 2005* (Arlington, VA, forthcoming); and NSF/SRS, Survey of Research and Development Funding and Performance by Nonprofit Organizations: FY 1996–97.

TABLE 9. Gross domestic product and research and development (federally funded, nonfederal, and total): 1994–2004

	GDP			R&D				R&D/GDP (percent)		
Year	Billions of current dollars	Implicit price deflator (2000 = 1.00)	Billions of constant 2000 dollars	Millions of current dollars	Millions of constant 2000 dollars	Federal support in millions of constant 2000 dollars	Nonfederal support in millions of constant 2000 dollars	Total	Federal support	Nonfederal support
Data column:[a]	[169]	[170]	[171]	[1]	[19]	[40]	[172]	[173]	[174]	[175]
1994	7,072	0.9026	7,836	169,198	187,460	67,331	120,128	2.39	0.86	1.53
1995	7,398	0.9211	8,032	183,616	199,352	68,359	130,993	2.48	0.85	1.63
1996	7,817	0.9385	8,329	197,336	210,262	67,539	142,723	2.52	0.81	1.71
1997	8,304	0.9541	8,704	212,140	222,338	67,670	154,669	2.55	0.78	1.78
1998	8,747	0.9647	9,067	227,651	235,977	68,801	167,176	2.60	0.76	1.84
1999	9,268	0.9787	9,470	244,970	250,306	68,504	181,803	2.64	0.72	1.92
2000	9,817	1.0000	9,817	267,207	267,207	66,400	200,808	2.72	0.68	2.05
2001	10,128	1.0240	9,891	277,326	270,828	71,112	199,716	2.74	0.72	2.02
2002	10,487	1.0409	10,075	275,797	264,956	74,632	190,325	2.63	0.74	1.89
2003 preliminary	11,004	1.0600	10,381	291,864	275,348	81,834	193,514	2.65	0.79	1.86
2004 preliminary	11,731	1.0820	10,842	312,068	288,419	86,307	202,112	2.66	0.80	1.86

GDP=gross domestic product

R&D=research and development

[a] See historical database, table D (http://www.nsf.gov/statistics/nsf06327/database.htm) for full series of historical data arranged in same data columns defined in this and other tables.

SOURCES: Department of Commerce, Bureau of Economic Analysis, special tabulations (Washington, DC, 2004); Office of Management and Budget, special tabulations (Washington, DC, 2004); and National Science Foundation, Division of Science Resources Statistics, special tabulations (Arlington, VA, 2005).

TABLE 10. Trends in federal and nonfederal research and development expenditures as percentage of total research and development: 1953–2004
(Percent)

Year	Federal				Nonfederal
	Total	Defense related	Space related	Civilian related	
1953	53.9	48.0	1.0	4.9	46.1
1954	55.2	49.0	1.0	5.2	44.8
1955	57.4	48.7	1.0	7.7	42.6
1956	58.6	49.6	0.9	8.0	41.4
1957	62.9	52.8	1.0	9.2	37.1
1958	63.9	53.1	1.8	9.0	36.1
1959	65.4	53.6	2.9	8.9	34.6
1960	65.0	51.4	4.4	9.2	35.0
1961	65.1	48.1	7.3	9.7	34.9
1962	64.8	49.1	6.6	9.1	35.2
1963	66.5	41.9	13.6	11.0	33.5
1964	66.8	37.0	19.0	10.9	33.2
1965	65.1	33.2	20.9	11.1	34.9
1966	64.2	32.4	19.6	12.2	35.8
1967	62.4	35.3	14.4	12.7	37.6
1968	60.7	34.7	13.6	12.4	39.3
1969	58.6	34.7	11.5	12.4	41.4
1970	57.0	33.4	10.3	13.3	43.0
1971	56.4	32.7	9.6	14.1	43.6
1972	55.8	33.0	7.9	14.9	44.2
1973	53.6	32.0	6.7	14.8	46.4
1974	51.8	29.3	6.9	15.6	48.2
1975	52.0	27.6	7.5	16.8	48.0
1976	51.5	26.9	7.7	16.9	48.5
1977	50.9	27.1	6.6	17.2	49.1
1978	50.1	25.9	6.2	18.0	49.9
1979	49.2	24.8	5.6	18.8	50.8
1980	47.4	24.2	5.3	17.9	52.6
1981	46.7	24.4	5.2	17.0	53.3
1982	46.0	26.1	4.9	15.0	54.0
1983	46.1	27.7	4.2	14.2	53.9
1984	45.5	28.7	3.0	13.7	54.5
1985	45.9	29.9	3.1	12.9	54.1
1986	45.4	31.4	3.0	11.0	54.6
1987	46.4	31.7	3.2	11.4	53.6
1988	44.9	30.2	3.5	11.2	55.1
1989	42.6	27.6	3.9	11.1	57.4
1990	40.5	25.1	4.3	11.1	59.5
1991	37.8	22.4	4.5	10.9	62.2
1992	36.8	21.6	4.3	10.9	63.2
1993	36.5	21.2	4.4	10.9	63.5
1994	35.9	19.7	4.5	11.7	64.1
1995	34.3	18.6	4.5	11.2	65.7
1996	32.1	17.6	4.1	10.4	67.9
1997	30.4	16.7	4.1	9.6	69.6
1998	29.2	15.7	3.8	9.6	70.8
1999	27.4	14.6	3.2	9.5	72.6
2000	24.8	13.4	2.3	9.2	75.2
2001	26.3	13.9	2.4	9.9	73.7
2002	28.2	15.4	2.5	10.3	71.8
2003 preliminary	29.7	16.7	2.6	10.4	70.3
2004 preliminary	29.9	17.2	2.5	10.2	70.1

NOTE: Details may not sum to totals because of rounding.

SOURCE: National Science Foundation, Division of Science Resources Statistics, unpublished tabulations (Arlington, VA, 2006).

TABLE 11. Research and development expenditures, by state, performing sector, and source of funds: 2002

(Millions of current dollars)

State	Performing sector: / Funding sector:	All R&D	R&D rank	Federal	FFRDCs			Industry			U&C[a]						Other nonprofit institutions	GSP		R&D intensity[b]	
													Other			Non-			GSP		
				Federal	Total	Federal	Non-federal[c]	Total	Federal	Industry[d]	Total	Federal	government	Industry	U&C	profit	Federal[e]	GSP	rank	Percent	Rank
State total[f]		255,707	na	20,101	11,524	11,085	439	182,403	14,120	164,582	36,245	21,769	2,493	2,186	7,092	2,701	5,434	10,407,141	na	2.46	na
Alabama		2,323	27	945	0	0	0	846	258	588	503	365	8	19	92	20	29	125,567	25	1.85	27
Alaska		308	47	113	0	0	0	51	3	48	129	71	4	24	28	2	15	29,708	46	1.04	41
Arizona		4,096	20	274	41	41	0	3,201	470	2,731	531	287	15	31	171	27	49	171,781	22	2.38	16
Arkansas		427	45	58	0	0	0	225	4	221	140	62	41	9	21	8	4	71,929	34	0.59	49
California		51,388	1	2,611	3,410	3,298	112	39,664	2,975	36,689	4,882	2,802	284	263	1,030	504	821	1,367,785	1	3.76	9
Colorado		4,218	19	324	355	349	6	2,823	169	2,654	645	485	24	34	77	25	71	179,410	21	2.35	17
Connecticut		6,774	12	94	0	0	0	6,077	317	5,761	538	375	9	23	69	62	65	165,744	23	4.09	7
Delaware		1,319	35	8	0	0	0	1,219	10	1,208	88	51	4	6	18	9	4	47,150	39	2.80	13
District of Columbia		2,706	24	2,019	9	9	0	194	92	102	252	206	4	12	10	19	232	66,440	36	4.07	8
Florida		5,498	14	670	0	0	0	3,707	858	2,848	1,086	559	118	67	277	64	35	520,500	4	1.06	40
Georgia		3,935	21	730	0	0	0	2,107	71	2,036	1,076	534	79	96	313	54	22	305,829	10	1.29	36
Hawaii		456	43	124	0	0	0	103	37	66	173	119	31	10	12	0	56	43,998	42	1.04	42
Idaho		1,370	33	24	260	252	8	992	3	990	93	42	21	7	21	1	1	38,558	44	3.55	10
Illinois		10,190	8	204	820	783	37	7,616	996	6,620	1,441	839	93	55	357	97	109	486,139	5	2.10	22
Indiana		4,326	18	99	0	0	0	3,572	123	3,450	651	276	54	43	225	51	4	204,946	15	2.11	21
Iowa		1,346	34	78	23	23	0	753	6	748	486	257	56	35	114	23	6	98,232	29	1.37	32
Kansas		1,865	28	32	0	0	0	1,427	D	D	300	134	45	14	91	16	106	89,508	31	2.08	23
Kentucky		1,128	36	28	0	0	0	656	6	650	333	150	45	9	99	30	111	122,282	27	0.92	45
Louisiana		858	37	122	0	0	0	248	14	233	483	201	97	31	109	46	5	131,584	24	0.65	47
Maine		429	44	20	0	0	0	250	21	229	69	26	11	4	22	6	90	39,039	43	1.10	38
Maryland		9,030	10	2,779	260	260	0	3,800	1,165	2,635	1,880	1,405	58	82	238	97	311	201,879	16	4.47	4
Massachusetts		14,316	3	677	451	444	7	10,279	1,995	8,284	1,706	1,262	47	148	89	161	1,203	288,088	12	4.97	2
Michigan		15,082	2	232	0	0	0	13,565	133	13,432	1,233	700	69	64	307	93	52	351,287	9	4.29	6
Minnesota		5,247	15	117	0	0	0	4,460	137	4,323	504	300	61	27	77	38	166	200,061	17	2.62	14
Mississippi		691	39	174	0	0	0	224	14	210	285	179	38	11	53	5	8	69,136	35	1.00	43
Missouri		2,478	26	141	0	0	0	1,592	151	1,441	706	448	27	30	161	39	39	187,543	20	1.32	35
Montana		236	49	33	0	0	0	66	1	65	122	66	23	8	24	2	15	23,773	48	0.99	44
Nebraska		663	40	46	0	0	0	342	7	335	267	89	10	21	130	17	8	60,962	37	1.09	39
Nevada		524	42	28	0	0	0	339	7	333	127	85	6	4	28	3	30	81,182	32	0.65	48
New Hampshire		1,435	32	58	0	0	0	1,153	D	D	220	138	8	10	42	21	4	46,448	40	3.09	12
New Jersey		13,020	6	677	74	73	1	11,566	238	11,328	683	315	63	33	197	75	20	380,169	8	3.42	11
New Mexico		4,689	17	471	3,577	3,420	157	331	92	239	293	195	14	11	64	8	17	53,515	38	8.76	1
New York		13,354	5	503	454	437	17	9,234	539	8,695	2,774	1,785	137	129	453	271	389	792,058	2	1.69	30

TABLE 11. Research and development expenditures, by state, performing sector, and source of funds: 2002

(Millions of current dollars)

State	Performing sector: Funding sector:	All R&D	R&D rank	Federal	FFRDCs			Industry			U&C[a]						Other nonprofit institutions	GSP	GSP rank	R&D intensity[b]	
					Total	Federal	Non-federal[c]	Total	Federal	Industry[d]	Total	Federal	Other government	Industry	U&C	Non-profit	Federal[e]			Percent	Rank
North Carolina		5,135	16	336	0	0	0	3,443	50	3,393	1,277	726	116	156	231	48	79	300,216	11	1.71	29
North Dakota		295	48	32	0	0	0	154	1	153	106	46	3	7	47	4	3	19,780	50	1.49	31
Ohio		8,310	11	743	0	0	0	6,230	823	5,407	1,117	643	79	81	229	86	220	388,224	7	2.14	20
Oklahoma		793	38	78	0	0	0	412	15	397	282	112	40	20	93	16	21	95,126	30	0.83	46
Oregon		2,892	23	133	0	0	0	2,320	17	2,302	387	274	42	12	37	22	52	115,138	28	2.51	15
Pennsylvania		9,763	9	434	45	42	3	7,064	114	6,950	1,913	1,344	79	159	207	124	307	428,950	6	2.28	18
Rhode Island		1,639	30	295	0	0	0	1,121	D	D	163	114	6	3	36	5	60	36,988	45	4.43	5
South Carolina		1,668	29	74	94	94	0	1,054	24	1,031	400	184	26	27	145	18	46	122,354	26	1.36	33
South Dakota		111	50	18	0	0	0	53	1	52	38	22	9	0	4	3	2	25,003	47	0.44	50
Tennessee		2,568	25	116	620	595	25	1,289	216	1,073	491	316	49	21	79	26	52	190,122	19	1.35	34
Texas		14,223	4	808	16	15	1	10,744	534	10,209	2,535	1,410	260	178	415	272	120	773,455	3	1.84	28
Utah		1,572	31	90	0	0	0	1,116	201	915	360	235	23	11	55	35	6	72,974	33	2.15	19
Vermont		398	46	20	0	0	0	286	7	279	90	59	4	7	14	5	2	19,604	51	2.03	25
Virginia		5,895	13	1,843	362	354	8	2,920	719	2,201	694	406	81	52	113	42	76	287,589	13	2.05	24
Washington		10,511	7	342	609	552	57	8,579	460	8,120	748	548	18	51	105	26	233	232,940	14	4.51	3
West Virginia		542	41	102	44	44	0	264	4	260	97	59	2	7	29	0	35	45,518	41	1.19	37
Wisconsin		3,585	22	114	0	0	0	2,649	19	2,630	806	443	50	21	218	74	16	190,650	18	1.88	26
Wyoming		80	51	10	0	0	0	21	1	20	42	20	2	3	16	1	7	20,285	49	0.39	51
Other and unknown		8,663	na	130	12	11	1	8,406	277	8,129	89	63	7	4	14	2	26	na	na	na	na

na=not applicable; D=data withheld to avoid disclosing operations of individual companies; FFRDC=federally funded research and development center; GSP=gross state product; R&D=research and development; U&C=universities and colleges

[a]State-level university R&D data have not been adjusted to eliminate double counting of funds passed through from one academic institution to another. At the national level, funds passed through to educational subrecipients account for 2.6 percent of total R&D expenditures reported by universities and colleges in FY2002.

[b]R&D intensity is ratio of total R&D performed in a state to GSP.

[c]Nonfederal sources of R&D expenditures reported by FFRDCs in FY2002 included state and local governments ($30 million), industry ($136 million), FFRDC institutional funds ($123 million), and other sources ($153 million).

[d]Industry sources of industry R&D expenditures include all nonfederal sources of industry R&D expenditures.

[e]Other sources of support for nonprofit institutions were unavailable by state. For 2002, total nonprofit performance is estimated at $11.6 billion. Industry provided an estimated $1.1 billion to nonprofit sector, and nonprofit institutions provided an estimated $4.7 billion.

[r]State totals differ from U.S. totals reported elsewhere for three reasons: some R&D expenditures cannot be allocated to 1 of the 50 states or the District of Columbia; nonfederal sources of nonprofit R&D expenditures, totaling an estimated $5.8 billion in 2002, could not be allocated by state; and state R&D data are not converted from fiscal years to calendar years.

NOTES: Industry R&D data refer to calendar years; other R&D data refer to fiscal years but may serve as approximations to calendar-year data. "Other and unknown" category reflects reported data that could not be assigned to 1 of the 50 states or the District of Columbia.

SOURCES: Data were derived from National Science Foundation, Division of Science Resources Statistics (NSF/SRS), Survey of Industrial Research and Development, 2002; NSF/SRS, Survey of Research and Development Expenditures at Universities and Colleges: FY 2002; and NSF/SRS, Survey of Federal Funds for Research and Development: FY 2002. GSP data are from the U.S. Bureau of Economic Analysis, http://www.bea.gov/bea/regional/gsp.htm, 2005.

TABLE 12. Research and development expenditures, by state, performing sector, and source of funds: 2003

(Millions of current dollars)

State	Performing sector: / Funding sector:	All R&D	R&D rank	Federal	FFRDCs			Industry			U&C[a]						Other nonprofit institutions	GSP	GSP rank	R&D intensity[b]	
					Total	Federal	Non-federal[c]	Total	Federal	Industry[d]	Total	Federal	Other government	Industry	U&C	Non-profit	Federal[e]			Percent	Rank
State total[f]		277,577	na	21,863	12,115	11,671	445	198,244	20,595	177,647	39,976	24,662	2,645	2,157	7,670	2,843	5,379	10,923,849	na	2.54	na
Alabama		2,543	27	937	0	0	0	999	461	539	558	410	7	15	105	21	49	130,792	25	1.94	28
Alaska		321	48	131	0	0	0	36	5	31	141	77	5	23	33	3	13	31,704	46	1.01	40
Arizona		3,578	22	291	44	44	0	2,605	574	2,031	618	342	40	40	172	25	19	183,272	22	1.95	27
Arkansas		509	43	53	0	0	0	270	7	263	183	82	55	10	27	9	3	74,540	34	0.68	47
California		59,664	1	2,834	3,404	3,297	107	47,142	4,497	42,644	5,363	3,184	283	251	1,080	564	920	1,438,134	1	4.15	7
Colorado		5,012	17	350	362	357	5	3,544	95	3,449	695	535	31	37	71	21	61	188,397	21	2.66	16
Connecticut		6,548	13	96	0	0	0	5,834	852	4,982	595	418	9	28	71	68	24	174,085	23	3.76	9
Delaware		1,414	35	9	0	0	0	1,298	12	1,285	105	73	4	3	20	5	2	50,486	39	2.80	14
District of Columbia		2,686	26	1,960	7	7	0	235	95	140	263	215	4	11	14	20	221	70,668	36	3.80	8
Florida		5,172	16	721	0	0	0	3,181	1,031	2,150	1,205	668	119	69	285	65	65	553,709	4	0.93	44
Georgia		3,923	20	614	0	0	0	2,108	57	2,051	1,176	638	85	74	322	56	25	321,199	10	1.22	37
Hawaii		438	45	87	0	0	0	133	53	80	185	149	12	7	17	0	33	46,671	42	0.94	43
Idaho		1,209	36	27	330	318	12	745	9	736	105	56	19	6	23	2	2	40,358	44	2.99	12
Illinois		11,045	8	223	804	769	35	8,319	190	8,129	1,614	964	94	49	400	108	86	499,731	5	2.21	20
Indiana		4,487	19	96	0	0	0	3,658	256	3,401	726	328	51	51	237	59	7	213,342	15	2.10	24
Iowa		1,451	34	87	25	25	0	833	7	826	499	284	51	36	115	13	7	102,400	29	1.42	34
Kansas		2,024	28	35	0	0	0	1,675	D	D	310	156	42	8	87	17	4	93,263	31	2.17	21
Kentucky		1,014	37	33	0	0	0	601	21	580	378	173	51	9	113	33	3	128,315	26	0.79	46
Louisiana		954	39	128	0	0	0	295	24	271	524	224	106	31	126	38	7	144,321	24	0.66	48
Maine		372	47	24	0	0	0	200	30	169	75	31	12	3	25	4	73	40,829	43	0.91	45
Maryland		10,162	9	3,538	296	296	0	3,998	1,745	2,253	2,031	1,504	63	99	257	108	299	213,073	16	4.77	3
Massachusetts		15,638	3	899	523	516	7	11,094	2,153	8,941	1,822	1,379	43	129	98	172	1,301	297,113	13	5.26	2
Michigan		16,884	2	243	0	0	0	15,241	213	15,028	1,388	793	94	69	347	86	11	359,440	9	4.70	4
Minnesota		5,842	15	141	0	0	0	5,003	236	4,767	517	298	60	25	73	62	181	210,184	17	2.78	15
Mississippi		1,519	32	163	0	0	0	1,021	D	D	324	208	37	10	63	7	11	71,872	35	2.11	23
Missouri		2,731	25	158	0	0	0	1,742	80	1,662	807	520	34	27	183	45	24	193,828	20	1.41	35
Montana		247	49	29	0	0	0	65	2	63	141	85	22	7	26	1	12	25,584	48	0.97	41
Nebraska		710	40	41	0	0	0	363	7	356	301	106	12	22	140	20	5	65,399	37	1.09	39
Nevada		579	41	37	0	0	0	383	31	352	155	104	8	6	33	4	5	89,711	32	0.65	49
New Hampshire		1,664	30	55	0	0	0	1,349	D	D	252	166	8	11	49	19	7	48,202	40	3.45	10
New Jersey		12,795	6	559	67	66	1	11,401	215	11,185	748	361	68	37	212	70	20	394,040	8	3.25	11
New Mexico		4,977	18	455	3,849	3,687	162	349	165	184	307	200	15	15	69	8	17	57,078	38	8.72	1
New York		13,031	5	572	453	437	16	8,556	598	7,958	3,090	2,015	161	133	524	258	359	838,035	2	1.55	32

TABLE 12. Research and development expenditures, by state, performing sector, and source of funds: 2003

(Millions of current dollars)

State	Performing sector: / Funding sector:	All R&D	R&D rank	Federal	FFRDCs			Industry			U&C[a]						Other nonprofit institutions	GSP	GSP rank	R&D intensity[b]	
													Other			Non-					
				Federal	Total	Federal	Non-Federal[c]	Total	Federal	Industry[d]	Total	Federal	government	Industry	U&C	profit	Federal[e]			Percent	Rank
North Carolina		6,343	14	413	0	0	0	4,424	108	4,315	1,395	838	117	184	207	48	112	315,456	11	2.01	25
North Dakota		382	46	30	0	0	0	216	2	214	134	66	4	7	51	6	2	21,597	50	1.77	31
Ohio		8,583	11	800	0	0	0	6,260	425	5,835	1,269	743	39	74	317	96	254	398,918	7	2.15	22
Oklahoma		968	38	68	0	0	0	577	33	545	295	127	41	17	94	16	28	101,168	30	0.96	42
Oregon		3,572	23	124	0	0	0	2,973	39	2,934	437	318	38	11	47	24	37	119,973	28	2.98	13
Pennsylvania		9,944	10	453	45	44	2	7,091	166	6,925	2,014	1,444	94	141	212	122	342	443,709	6	2.24	19
Rhode Island		1,757	29	301	0	0	0	1,203	D	D	187	134	7	3	37	7	66	39,363	45	4.46	6
South Carolina		1,616	31	79	94	94	0	976	36	940	435	226	22	23	152	12	31	127,963	27	1.26	36
South Dakota		149	50	20	0	0	0	75	2	73	50	28	10	1	5	6	4	27,337	47	0.55	50
Tennessee		2,998	24	140	691	664	26	1,507	206	1,302	600	383	55	22	105	36	61	203,071	18	1.48	33
Texas		14,785	4	830	18	17	1	11,057	638	10,419	2,766	1,552	339	174	417	284	115	821,943	3	1.80	30
Utah		1,506	33	116	0	0	0	996	135	861	385	264	23	9	57	32	8	76,674	33	1.96	26
Vermont		492	44	24	0	0	0	360	10	349	107	72	3	8	17	7	1	20,544	51	2.39	18
Virginia		7,582	12	2,166	381	373	8	4,152	1,846	2,306	776	483	77	57	116	44	107	304,116	12	2.49	17
Washington		11,469	7	412	679	615	64	9,222	103	9,119	870	642	20	52	129	27	286	245,143	14	4.68	5
West Virginia		538	42	125	43	43	0	219	21	198	121	74	3	2	39	3	30	46,726	41	1.15	38
Wisconsin		3,642	21	126	0	0	0	2,623	34	2,589	881	504	50	20	222	84	12	198,096	19	1.84	29
Wyoming		113	51	9	0	0	0	37	2	35	60	23	2	3	29	3	7	22,279	49	0.51	51
Other and unknown		5,762	na	0	0	0	0	5,762	104	5,658	0	0	0	0	0	0	0	na	na	na	na

na=not applicable; D=data withheld to avoid disclosing operations of individual companies; FFRDC=federally funded research and development center; GSP=gross state product; R&D=research and development; U&C=universities and colleges

[a]State-level university R&D data have not been adjusted to eliminate double counting of funds passed through from one academic institution to another. At the national level, funds passed through to educational subrecipients account for 2.8 percent of total R&D expenditures reported by universities and colleges in FY2003.

[b]R&D intensity is ratio of total R&D performed in a state to GSP.

[c]Nonfederal sources of R&D expenditures reported by FFRDCs in FY2003 included state and local governments ($31 million), industry ($141 million), FFRDC institutional funds ($140 million), and other sources ($133 million).

[d]Industry sources of industry R&D expenditures include all nonfederal sources of industry R&D expenditures.

[e]Other sources of support for nonprofit institutions were unavailable by state. For 2003, total nonprofit performance is estimated at $12.0 billion. Industry provided an estimated $1.1 billion to nonprofit sector, and nonprofit institutions provided an estimated $5.1 billion.

[f]State totals differ from U.S. totals reported elsewhere for three reasons: some R&D expenditures cannot be allocated to 1 of the 50 states or the District of Columbia; nonfederal sources of nonprofit R&D expenditures, totaling an estimated $6.2 billion in 2003, could not be allocated by state; and state R&D data are not converted from fiscal years to calendar years.

NOTES: Industry R&D data refer to calendar years; other R&D data refer to fiscal years but may serve as approximations to calendar-year data. "Other and unknown" category reflects reported data that could not be assigned to 1 of the 50 states or the District of Columbia.

SOURCES: Data were derived from National Science Foundation, Division of Science Resources Statistics (NSF/SRS), Survey of Industrial Research and Development, 2003; NSF/SRS, Survey of Research and Development Expenditures at Universities and Colleges: FY 2003; and NSF/SRS, Survey of Federal Funds for Research and Development: FY 2003. GSP data are from the U.S. Bureau of Economic Analysis, http://www.bea.gov/bea/regional/gsp.htm, 2005.

TABLE 13. Federally funded research and development centers' R&D expenditures: FY 2003
(Thousands of current dollars)

FFRDC	Total	Federal	Sponsoring agency	Location
All FFRDCs	12,126,881	11,681,288		
University-administered FFRDCs	7,200,056	6,948,179		
Ames Laboratory	25,213	25,213	Department of Energy	Ames, IA
Argonne National Laboratory	500,828	466,340	Department of Energy	Argonne, IL
Ernest Orlando Lawrence Berkeley National Laboratory	441,500	381,264	Department of Energy	Berkeley, CA
Fermi National Accelerator Laboratory	303,340	303,041	Department of Energy	Batavia, IL
Jet Propulsion Laboratory	1,390,560	1,390,560	NASA	Pasadena, CA
Lawrence Livermore National Laboratory	1,286,215	1,258,505	Department of Energy	Livermore, CA
Lincoln Laboratory	522,851	516,112	DOD, Department of the Air Force	Lexington, MA
Los Alamos National Laboratory	2,106,145	1,990,573	Department of Energy	Los Alamos, NM
National Astronomy and Ionosphere Center	11,508	10,644	NSF	Arecibo, PR
National Center for Atmospheric Research	140,756	137,993	NSF	Boulder, CO
National Optical Astronomy Observatory	44,409	44,409	NSF	Tucson, AZ
National Radio Astronomy Observatory	42,842	42,644	NSF	Green Bank, WV
Princeton Plasma Physics Laboratory	66,764	66,345	Department of Energy	Princeton, NJ
Software Engineering Institute	45,412	43,470	DOD, Office of the Secretary of Defense	Pittsburgh, PA
Stanford Linear Accel Center	164,747	164,747	Department of Energy	Stanford, CA
Thomas Jefferson National Accelerator Facility	106,966	106,319	Department of Energy	Newport News, VA
Industry-administered FFRDCs	2,463,439	2,405,585		
Idaho National Engineering and Environmental Laboratory	330,154	318,363	Department of Energy	Idaho Falls, ID
National Cancer Institute at Frederick	296,000	296,000	NIH	Frederick, MD
Sandia National Laboratory	1,742,862	1,696,799	Department of Energy	Albuquerque, NM
Savannah River Technology	94,423	94,423	Department of Energy	Aiken, SC
Nonprofit-administered FFRDC	2,463,386	2,327,524		
Aerospace FFRDC	32,745	13,619	DOD, Department of the Air Force	El Segundo, CA
Arroyo Center	27,889	27,889	DOD, Department of the Army	Santa Monica, CA
Brookhaven National Laboratory	452,728	436,969	Department of Energy	Upton, NY
C3I FFRDC	32,696	32,696	DOD, Office of the Secretary of Defense	Bedford, MA/McLean, VA
Center for Advanced Aviation System Development	6,633	3,180	FAA	McLean, VA
Center for Naval Analyses	75,869	71,895	DOD, Department of the Navy	Alexandria, VA
Center for Nuclear Waste Regulatory Analyses	17,625	16,884	Nuclear Regulatory Commission	San Antonio, TX
Institute for Defense Analyses Communications and Computing	45,960	45,960	National Security Agency	Alexandria, VA
Institute for Defense Analysis Studies	110,200	110,200	DOD, Office of the Secretary of Defense	Alexandria, VA
Internal Revenue Service FFRDC	2,834	2,834	IRS	McLean, VA
National Defense Research Institute	26,908	26,908	DOD, Office of the Secretary of Defense	Santa Monica, CA
National Renewable Energy Laboratory	221,496	219,015	Department of Energy	Golden, CO
Oak Ridge National Laboratory	690,538	664,210	Department of Energy	Oak Ridge, TN
Pacific Northwest National Laboratory	679,000	615,000	Department of Energy	Richland, WA
Project Air Force	33,555	33,555	DOD, Department of the Air Force	Santa Monica, CA
Science and Technology Policy Institute	6,710	6,710	NSF	Washington, DC

DOD=Department of Defense; FAA=Federal Aviation Administration; FFRDC=federally funded research and development center; IRS=Internal Revenue Service; NASA=National Air and Space Administration; NIH=National Institutes of Health; NSF=National Science Foundation

NOTES: Totals differ from those reported in table 1 for FFRDCs because data in table 1 have been adjusted from a fiscal year basis to a calendar year basis. More information about the 36 FFRDCs can be found on NSF website, http://www.nsf.gov/statistics/ffrdc/.

SOURCE: NSF, Division of Science Resources Statistics, *Academic Research and Development Expenditures: Fiscal Year 2003* (2005).

TABLE 14. International research and development expenditures and research and development as percentage of gross domestic product, by selected country and for all Organisation for Economic Co-operation and Development countries: 1981–2004

Year	United States	Japan[a]	Germany[b]	France	United Kingdom	Italy	Canada	Russian Federation	Total OECD
	Billions of constant 2000 U.S. dollars[c]								
1981	123.2	42.7	29.9	19.3	21.5	8.7	6.3	NA	276.1
1982	129.5	45.7	30.6	20.7	NA	9.0	6.8	NA	289.2
1983	138.8	49.2	31.0	21.4	20.9	9.6	6.9	NA	304.8
1984	152.2	52.5	31.9	22.6	NA	10.5	7.5	NA	327.8
1985	165.4	58.2	35.0	23.6	22.7	12.0	8.1	NA	356.5
1986	169.3	59.2	36.0	24.1	23.8	12.4	8.5	NA	367.5
1987	173.1	63.2	37.9	25.1	24.1	13.4	8.5	NA	381.3
1988	177.3	68.0	39.2	26.2	24.7	14.3	8.8	NA	395.9
1989	181.0	74.1	40.7	27.8	25.4	15.0	9.5	NA	412.5
1990	186.7	80.2	41.2	29.8	25.5	15.9	9.9	32.8	431.2
1991	191.1	82.0	44.3	30.2	24.2	15.3	10.1	23.7	450.6
1992	191.9	81.2	43.1	30.8	23.8	14.9	10.5	10.0	452.6
1993	188.0	79.1	41.5	31.0	24.7	14.1	11.1	9.0	448.5
1994	187.9	78.4	40.8	30.9	25.2	13.4	12.0	8.6	451.8
1995	199.9	83.4	41.7	31.2	25.2	13.1	12.1	7.7	478.4
1996	210.8	89.0	42.2	31.3	24.9	13.4	12.0	8.5	499.9
1997	222.9	92.7	43.8	30.9	24.8	14.2	12.5	9.2	523.1
1998	236.4	95.2	45.4	31.3	25.3	14.7	13.8	8.3	544.7
1999	250.8	95.6	48.8	32.7	27.1	14.6	14.9	9.6	572.5
2000	267.8	98.9	51.6	33.8	28.0	15.4	16.6	10.8	606.9
2001	271.3	101.7	52.4	35.3	28.8	16.4	18.2	12.8	625.7
2002	265.1	103.1	53.0	36.3	29.7	17.1	17.8	14.2	625.6
2003	275.0	105.4	53.6	35.8	30.2	NA	17.9	15.6	642.8
2004	286.4	NA	53.7	36.3	NA	NA	18.3	15.3	NA
	Percent of GDP								
1981	2.34	2.12	2.43	1.90	2.38	0.88	1.24	NA	1.92
1982	2.51	2.21	2.50	1.98	NA	0.90	1.39	NA	2.01
1983	2.58	2.34	2.50	2.01	2.20	0.95	1.36	NA	2.06
1984	2.64	2.43	2.50	2.10	NA	1.01	1.40	NA	2.12
1985	2.75	2.56	2.68	2.15	2.24	1.12	1.44	NA	2.23
1986	2.72	2.53	2.70	2.14	2.26	1.13	1.48	NA	2.23
1987	2.69	2.60	2.80	2.18	2.20	1.19	1.43	NA	2.24
1988	2.65	2.62	2.79	2.18	2.14	1.22	1.40	NA	2.22
1989	2.61	2.71	2.79	2.23	2.15	1.24	1.47	NA	2.24
1990	2.65	2.79	2.67	2.33	2.15	1.29	1.53	2.03	2.27
1991	2.71	2.76	2.47	2.33	2.07	1.23	1.60	1.43	2.20
1992	2.64	2.71	2.35	2.33	2.03	1.18	1.64	0.74	2.16
1993	2.52	2.63	2.28	2.37	2.06	1.13	1.70	0.77	2.11
1994	2.42	2.58	2.18	2.32	2.01	1.05	1.76	0.84	2.06
1995	2.51	2.69	2.19	2.29	1.95	1.00	1.72	0.85	2.08
1996	2.55	2.78	2.19	2.27	1.88	1.01	1.68	0.97	2.10
1997	2.58	2.84	2.24	2.19	1.81	1.05	1.68	1.04	2.13
1998	2.62	2.95	2.27	2.14	1.80	1.07	1.79	0.95	2.15
1999	2.66	2.96	2.40	2.16	1.87	1.04	1.82	1.00	2.19
2000	2.74	2.99	2.45	2.15	1.86	1.07	1.93	1.05	2.23
2001	2.76	3.07	2.46	2.20	1.87	1.11	2.08	1.18	2.28
2002	2.65	3.12	2.49	2.23	1.89	1.16	1.97	1.25	2.24
2003	2.68	3.15	2.52	2.18	1.88	0.00	1.95	1.29	2.26
2004	2.68	NA	2.49	2.16	NA	NA	1.93	1.17	NA

NA=not available

GDP=gross domestic product

OECD=Organisation for Economic Co-operation and Development

[a] Data on Japanese research and development in 1996 and later years may not be consistent with data in earlier years because of changes in methodology.

[b] Data for 1981–90 are for West Germany.

[c] Conversions of foreign currencies to U.S. dollars are calculated with each country's GDP implicit price deflator and OECD purchasing power parity exchange rates.

SOURCE: OECD, *Main Science and Technology Indicators* (Paris, 2005).