

TABLE 6. U.S. research and development expenditures, by source of funds and performing sector: 1953–2016

Year	All funding sources																							
	Federal								Nonfederal government					Business					Higher education	Other nonprofit organizations				
	All performers	Total	Federal intramural	FFRDC	Non-federal government	Business	Higher education	ONP	Total	FFRDC	Non-federal government	Business	Higher education	Total	FFRDC	Business	Higher education	ONP	Higher education	Total	FFRDC	Business	Higher education	ONP
Current \$millions																								
1953	5,160	2,783	1,015	131	NA	1,430	149	58	40	NA	NA	NA	40	2,247	NA	2,200	21	26	37	55	NA	NA	27	28
1954	5,621	3,102	963	165	NA	1,750	165	61	45	NA	NA	NA	45	2,375	NA	2,320	24	31	40	60	NA	NA	29	31
1955	6,185	3,507	973	319	NA	1,960	191	65	50	NA	NA	NA	50	2,522	NA	2,460	27	35	42	64	NA	NA	32	32
1956	8,501	4,979	1,131	561	NA	2,995	221	71	57	NA	NA	NA	57	3,346	NA	3,277	32	37	46	74	NA	NA	36	38
1957	9,908	6,233	1,297	688	NA	3,928	242	79	64	NA	NA	NA	64	3,470	NA	3,396	37	37	51	91	NA	NA	40	51
1958	10,915	6,974	1,507	657	NA	4,436	280	95	72	NA	NA	NA	72	3,707	NA	3,630	39	38	56	107	NA	NA	45	62
1959	12,490	8,167	1,681	789	NA	5,217	356	125	81	NA	NA	NA	81	4,065	NA	3,983	40	42	61	117	NA	NA	50	67
1960	13,711	8,915	1,801	910	NA	5,604	453	148	90	NA	NA	NA	90	4,516	NA	4,428	40	48	67	123	NA	NA	55	68
1961	14,564	9,484	1,987	1,087	NA	5,685	557	169	101	NA	NA	NA	101	4,757	NA	4,668	40	49	75	148	NA	NA	62	86
1962	15,636	10,138	2,188	1,056	NA	6,008	687	200	112	NA	NA	NA	112	5,124	NA	5,029	41	54	84	179	NA	NA	70	109
1963	17,519	11,646	2,559	1,159	NA	6,856	839	234	125	NA	NA	NA	125	5,456	NA	5,360	41	55	96	197	NA	NA	78	119
1964	19,103	12,765	2,966	1,297	NA	7,257	995	250	138	NA	NA	NA	138	5,888	NA	5,792	41	55	114	200	NA	NA	88	112
1965	20,253	13,194	3,157	1,218	NA	7,367	1,167	286	150	NA	NA	NA	150	6,549	NA	6,445	42	62	136	225	NA	NA	101	124
1966	22,072	14,165	3,308	1,217	NA	7,977	1,335	329	160	NA	NA	NA	160	7,331	NA	7,216	45	70	165	252	NA	NA	114	138
1967	23,347	14,564	3,445	1,340	NA	7,946	1,491	342	168	NA	NA	NA	168	8,146	NA	8,020	52	74	200	271	NA	NA	126	145
1968	24,667	14,965	3,498	1,372	NA	8,145	1,586	364	185	NA	NA	NA	185	9,008	NA	8,869	58	81	221	290	NA	NA	139	151
1969	25,996	15,228	3,790	1,440	NA	7,987	1,624	388	208	NA	NA	NA	208	10,011	NA	9,857	61	93	233	316	NA	NA	155	161
1970	26,271	14,984	4,154	1,430	NA	7,306	1,686	410	237	NA	NA	NA	237	10,449	NA	10,288	66	95	259	343	NA	NA	171	172
1971	26,952	15,210	4,409	1,441	NA	7,175	1,760	427	262	NA	NA	NA	262	10,824	NA	10,654	72	98	290	366	NA	NA	182	184
1972	28,740	16,039	4,676	1,533	NA	7,469	1,890	472	282	NA	NA	NA	282	11,715	NA	11,535	79	101	312	393	NA	NA	195	198
1973	30,952	16,587	4,837	1,576	NA	7,600	2,009	566	301	NA	NA	NA	301	13,299	NA	13,104	90	105	344	421	NA	NA	210	211
1974	33,359	17,287	5,132	1,784	NA	7,572	2,160	639	320	NA	NA	NA	320	14,886	NA	14,667	105	114	394	474	NA	NA	239	235
1975	35,671	18,533	5,561	2,019	NA	7,878	2,400	675	348	NA	NA	NA	348	15,824	NA	15,582	118	124	432	534	NA	NA	272	262
1976	39,435	20,292	5,890	2,401	NA	8,671	2,619	711	369	NA	NA	NA	369	17,702	NA	17,436	131	135	480	592	NA	NA	300	292
1977	43,338	22,071	6,211	2,704	NA	9,523	2,893	740	394	NA	NA	NA	394	19,642	NA	19,340	155	147	569	662	NA	NA	337	326
1978	48,719	24,414	6,962	3,186	NA	10,107	3,329	830	443	NA	NA	NA	443	22,457	NA	22,115	182	160	679	727	NA	NA	364	363
1979	55,379	27,225	7,471	3,567	NA	11,354	3,848	985	482	NA	NA	NA	482	26,097	NA	25,708	215	174	785	791	NA	NA	386	405
1980	63,224	29,986	7,831	4,052	NA	12,752	4,335	1,017	519	NA	NA	NA	519	30,929	NA	30,476	264	189	920	871	NA	NA	419	452
1981	72,292	33,739	8,605	4,393	NA	14,997	4,670	1,075	581	NA	NA	NA	581	35,948	NA	35,428	314	206	1,058	967	NA	NA	463	504
1982	80,748	37,133	9,501	4,563	NA	17,061	4,879	1,129	621	NA	NA	NA	621	40,692	NA	40,105	363	224	1,207	1,095	NA	NA	534	561
1983	89,949	41,451	10,830	5,011	NA	19,095	5,210	1,306	658	NA	NA	NA	658	45,264	NA	44,588	432	244	1,357	1,220	NA	NA	595	626

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	Federal								Nonfederal government					Business					Higher education						
	All performers	Total	Federal intra-mural	FFRDC	Non-federal government	Business	Higher education	ONP	Total	FFRDC	Non-federal government	Business	Higher education	Total	FFRDC	Business	Higher education	ONP		Higher education	Total	FFRDC	Business	Higher education	ONP
1984	102,244	46,470	11,916	5,602	NA	21,657	5,748	1,548	721	NA	NA	NA	721	52,187	NA	51,404	518	265	1,514	1,351	NA	NA	654	698	
1985	114,671	52,641	13,093	6,134	NA	25,333	6,388	1,694	834	NA	NA	NA	834	57,962	NA	57,043	630	289	1,743	1,491	NA	NA	713	778	
1986	120,249	54,622	13,505	6,405	NA	26,000	7,028	1,686	969	NA	NA	NA	969	60,991	NA	59,932	745	314	2,019	1,647	NA	NA	780	867	
1987	126,360	58,609	13,588	6,792	NA	28,757	7,768	1,704	1,065	NA	NA	NA	1,065	62,576	NA	61,403	831	342	2,262	1,849	NA	NA	882	967	
1988	133,881	60,131	14,342	7,212	NA	28,221	8,593	1,762	1,165	NA	NA	NA	1,165	67,977	NA	66,672	933	372	2,527	2,081	NA	NA	1,003	1,078	
1989	141,891	60,465	15,231	7,497	NA	26,359	9,317	2,062	1,274	NA	NA	NA	1,274	74,966	NA	73,501	1,061	405	2,852	2,333	NA	NA	1,131	1,202	
1990	151,993	61,610	15,671	7,853	NA	25,802	9,939	2,346	1,399	NA	NA	NA	1,399	83,208	NA	81,602	1,166	440	3,187	2,589	NA	NA	1,249	1,340	
1991	160,876	60,783	15,249	8,093	NA	24,095	10,667	2,679	1,483	NA	NA	NA	1,483	92,300	NA	90,580	1,242	479	3,458	2,852	NA	NA	1,358	1,494	
1992	165,350	60,915	15,853	8,360	NA	22,369	11,528	2,806	1,525	NA	NA	NA	1,525	96,229	NA	94,388	1,320	521	3,569	3,113	NA	NA	1,448	1,666	
1993	165,730	60,528	16,531	8,003	NA	20,844	12,307	2,843	1,557	NA	NA	NA	1,557	96,549	NA	94,591	1,392	567	3,709	3,388	NA	NA	1,531	1,857	
1994	169,207	60,777	16,355	8,254	NA	20,261	12,996	2,911	1,623	NA	NA	NA	1,623	99,204	NA	97,131	1,456	617	3,938	3,665	NA	NA	1,595	2,071	
1995	183,625	62,969	16,904	8,448	NA	21,178	13,592	2,847	1,751	NA	NA	NA	1,751	110,871	NA	108,652	1,548	671	4,110	3,925	NA	NA	1,617	2,308	
1996	197,346	63,394	16,585	8,464	NA	21,356	14,084	2,906	1,861	NA	NA	NA	1,861	123,417	NA	121,015	1,672	730	4,436	4,239	NA	NA	1,666	2,574	
1997	211,894	64,362	16,819	8,413	NA	21,798	14,317	3,014	1,902	NA	NA	NA	1,902	136,208	NA	133,611	1,788	809	4,852	4,571	NA	NA	1,767	2,804	
1998	225,759	65,908	17,362	8,480	NA	22,086	14,699	3,281	1,920	NA	NA	NA	1,920	147,774	NA	145,016	1,898	859	5,193	4,963	NA	NA	1,871	3,092	
1999	244,451	66,817	18,142	8,704	NA	20,496	15,714	3,761	2,036	NA	NA	NA	2,036	164,545	NA	161,594	2,020	931	5,654	5,399	NA	NA	2,050	3,349	
2000	267,950	67,238	19,247	9,269	NA	17,117	17,095	4,510	2,182	NA	NA	NA	2,182	185,975	NA	182,844	2,112	1,020	6,270	6,285	NA	NA	2,258	4,027	
2001	278,539	73,793	22,374	10,056	NA	16,899	18,976	5,488	2,341	22	NA	NA	2,319	188,408	142	185,118	2,120	1,029	6,874	7,122	218	NA	2,461	4,443	
2002	277,911	78,873	23,798	11,242	NA	16,401	21,655	5,778	2,553	32	NA	NA	2,521	180,704	135	177,467	2,103	998	7,673	8,109	275	NA	2,732	5,102	
2003	291,365	85,133	24,982	11,841	NA	17,798	24,567	5,945	2,788	32	NA	NA	2,756	186,171	134	182,926	2,090	1,020	8,286	8,988	245	NA	2,879	5,864	
2004	302,731	90,795	24,898	12,471	NA	20,266	26,624	6,537	2,926	31	NA	NA	2,896	191,346	122	188,035	2,148	1,041	8,637	9,028	165	NA	2,993	5,870	
2005	325,288	95,413	26,322	12,894	NA	21,909	27,743	6,545	2,977	32	NA	NA	2,945	207,775	139	204,250	2,279	1,107	9,353	9,771	180	NA	3,170	6,420	
2006	350,908	99,938	28,240	12,969	105	24,304	28,277	6,044	3,293	31	204	NA	3,059	227,182	171	223,365	2,464	1,182	10,176	10,320	200	NA	3,394	6,726	
2007	377,890	105,128	29,859	13,845	135	26,585	28,725	5,980	3,594	32	253	NA	3,308	246,815	180	242,682	2,697	1,257	10,933	11,420	216	NA	3,767	7,438	
2008	404,773	117,615	29,839	15,369	176	36,360	29,635	6,236	4,221	33	315	306	3,567	258,016	199	253,562	2,954	1,301	11,738	13,184	209	452	4,161	8,362	
2009	402,931	125,765	30,560	16,571	224	39,573	31,741	7,097	4,295	40	381	195	3,679	246,610	184	242,135	3,033	1,258	12,056	14,205	218	490	4,400	9,097	
2010	406,580	126,617	31,970	18,409	264	34,199	34,682	7,093	4,302	46	427	156	3,673	248,124	174	243,732	2,953	1,265	12,262	15,275	199	890	4,515	9,672	
2011	426,160	127,015	34,950	18,176	273	31,309	35,742	6,564	4,386	30	421	321	3,615	266,421	189	261,901	2,999	1,333	13,104	15,235	179	561	4,630	9,865	
2012	433,619	123,838	34,017	17,727	266	30,621	34,968	6,239	4,158	42	398	157	3,560	275,717	185	270,997	3,169	1,366	14,300	15,607	173	476	4,899	10,059	
2013	453,964	120,130	33,406	17,296	257	29,362	33,839	5,970	4,244	45	362	194	3,643	297,167	195	292,153	3,375	1,444	15,378	17,045	144	819	5,312	10,770	
2014	475,426	118,363	34,783	17,523	247	26,554	33,121	6,135	4,214	26	336	138	3,715	318,382	218	313,043	3,601	1,520	16,217	18,250	137	993	5,701	11,420	
2015 ^a	495,144	120,933	35,673	18,287	249	26,990	33,546	6,189	4,280	19	361	127	3,772	333,207	205	327,589	3,842	1,572	17,334	19,390	138	1,115	6,159	11,978	
2016 ^b	509,967	122,656	37,999	19,091	262	24,717	34,205	6,382	4,425	22	389	137	3,877	343,562	195	337,697	4,064	1,607	18,686	20,638	152	1,202	6,689	12,594	

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	Federal								Nonfederal government					Business					Higher education	Other nonprofit organizations				
	All performers	Total	Federal intra-mural	FFRDC	Non-federal government	Business	Higher education	ONP	Total	FFRDC	Non-federal government	Business	Higher education	Total	FFRDC	Business	Higher education	ONP	Higher education	Total	FFRDC	Business	Higher education	ONP
Constant 2009 \$millions																								
1953	34,048	18,360	6,697	864	NA	9,436	983	379	261	NA	NA	NA	261	14,823	NA	14,516	135	172	241	363	NA	NA	178	185
1954	36,745	20,280	6,293	1,075	NA	11,441	1,075	396	291	NA	NA	NA	291	15,524	NA	15,167	154	203	258	392	NA	NA	190	203
1955	39,748	22,538	6,253	2,047	NA	12,596	1,227	415	321	NA	NA	NA	321	16,208	NA	15,809	174	225	270	411	NA	NA	206	206
1956	52,831	30,942	7,026	3,487	NA	18,614	1,374	441	351	NA	NA	NA	351	20,792	NA	20,367	196	230	286	460	NA	NA	224	236
1957	59,592	37,486	7,801	4,135	NA	23,625	1,453	472	385	NA	NA	NA	385	20,867	NA	20,425	220	223	307	547	NA	NA	241	307
1958	64,206	41,024	8,862	3,862	NA	26,094	1,647	559	424	NA	NA	NA	424	21,806	NA	21,353	229	224	326	626	NA	NA	262	365
1959	72,451	47,376	9,751	4,577	NA	30,264	2,062	722	467	NA	NA	NA	467	23,578	NA	23,105	229	244	354	676	NA	NA	287	389
1960	78,453	51,011	10,302	5,207	NA	32,065	2,589	847	515	NA	NA	NA	515	25,840	NA	25,337	229	275	383	704	NA	NA	315	389
1961	82,428	53,676	11,246	6,149	NA	32,175	3,150	956	569	NA	NA	NA	569	26,923	NA	26,419	226	277	422	838	NA	NA	351	487
1962	87,421	56,681	12,230	5,904	NA	33,591	3,838	1,118	626	NA	NA	NA	626	28,645	NA	28,117	226	302	470	998	NA	NA	389	609
1963	96,851	64,380	14,144	6,405	NA	37,902	4,636	1,294	691	NA	NA	NA	691	30,160	NA	29,632	224	304	531	1,089	NA	NA	431	658
1964	104,011	69,499	16,146	7,062	NA	39,512	5,418	1,361	749	NA	NA	NA	749	32,056	NA	31,536	221	299	618	1,089	NA	NA	479	610
1965	108,294	70,551	16,878	6,510	NA	39,393	6,240	1,529	799	NA	NA	NA	799	35,016	NA	34,463	222	332	727	1,200	NA	NA	537	663
1966	114,799	73,674	17,205	6,327	NA	41,489	6,943	1,709	832	NA	NA	NA	832	38,129	NA	37,531	234	364	856	1,308	NA	NA	590	718
1967	118,000	73,607	17,412	6,773	NA	40,161	7,533	1,729	849	NA	NA	NA	849	41,169	NA	40,535	260	374	1,008	1,367	NA	NA	634	733
1968	119,577	72,544	16,955	6,651	NA	39,485	7,689	1,765	894	NA	NA	NA	894	43,666	NA	42,995	279	393	1,069	1,403	NA	NA	671	732
1969	120,114	70,362	17,513	6,654	NA	36,904	7,501	1,790	961	NA	NA	NA	961	46,254	NA	45,545	280	430	1,077	1,460	NA	NA	716	744
1970	115,302	65,764	18,231	6,274	NA	32,065	7,397	1,797	1,040	NA	NA	NA	1,040	45,857	NA	45,153	287	417	1,135	1,505	NA	NA	750	755
1971	112,571	63,529	18,414	6,017	NA	29,968	7,349	1,781	1,094	NA	NA	NA	1,094	45,209	NA	44,499	301	409	1,209	1,529	NA	NA	760	769
1972	115,066	64,215	18,720	6,138	NA	29,903	7,567	1,888	1,129	NA	NA	NA	1,129	46,903	NA	46,182	316	404	1,247	1,571	NA	NA	779	793
1973	117,527	62,982	18,365	5,984	NA	28,858	7,626	2,149	1,143	NA	NA	NA	1,143	50,497	NA	49,757	342	399	1,306	1,599	NA	NA	797	801
1974	116,224	60,227	17,881	6,215	NA	26,381	7,525	2,225	1,113	NA	NA	NA	1,113	51,862	NA	51,100	364	398	1,371	1,651	NA	NA	831	820
1975	113,745	59,097	17,733	6,438	NA	25,121	7,653	2,152	1,110	NA	NA	NA	1,110	50,459	NA	49,686	376	396	1,376	1,704	NA	NA	867	836
1976	119,199	61,335	17,804	7,256	NA	26,210	7,916	2,149	1,115	NA	NA	NA	1,115	53,508	NA	52,704	396	409	1,451	1,789	NA	NA	905	884
1977	123,345	62,818	17,678	7,697	NA	27,104	8,232	2,107	1,121	NA	NA	NA	1,121	55,902	NA	55,044	440	419	1,618	1,886	NA	NA	958	928
1978	129,565	64,926	18,515	8,473	NA	26,879	8,852	2,207	1,178	NA	NA	NA	1,178	59,722	NA	58,813	483	426	1,806	1,933	NA	NA	967	967
1979	136,047	66,883	18,354	8,762	NA	27,893	9,453	2,420	1,183	NA	NA	NA	1,183	64,111	NA	63,156	527	428	1,928	1,942	NA	NA	947	995
1980	142,470	67,571	17,646	9,130	NA	28,736	9,767	2,292	1,168	NA	NA	NA	1,168	69,696	NA	68,675	594	427	2,072	1,962	NA	NA	944	1,018
1981	148,990	69,534	17,733	9,054	NA	30,908	9,624	2,214	1,197	NA	NA	NA	1,197	74,087	NA	73,015	647	425	2,179	1,992	NA	NA	954	1,038
1982	156,699	72,060	18,438	8,855	NA	33,109	9,467	2,191	1,205	NA	NA	NA	1,205	78,967	NA	77,828	704	435	2,341	2,125	NA	NA	1,035	1,090
1983	167,927	77,384	20,218	9,354	NA	35,649	9,727	2,437	1,228	NA	NA	NA	1,228	84,504	NA	83,242	807	456	2,532	2,279	NA	NA	1,110	1,169

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1984	184,335	83,781	21,483	10,101	NA	39,046	10,362	2,790	1,300	NA	NA	NA	1,300	94,088	NA	92,677	933	479	2,730	2,436	NA	NA	1,178	1,258
1985	200,332	91,965	22,873	10,716	NA	44,257	11,160	2,959	1,456	NA	NA	NA	1,456	101,261	NA	99,656	1,101	505	3,045	2,605	NA	NA	1,246	1,359
1986	205,920	93,538	23,126	10,968	NA	44,524	12,034	2,887	1,659	NA	NA	NA	1,659	104,445	NA	102,631	1,276	538	3,457	2,821	NA	NA	1,336	1,485
1987	211,005	97,870	22,691	11,341	NA	48,020	12,972	2,846	1,778	NA	NA	NA	1,778	104,494	NA	102,535	1,388	571	3,777	3,087	NA	NA	1,472	1,615
1988	216,002	97,015	23,139	11,637	NA	45,532	13,864	2,843	1,880	NA	NA	NA	1,880	109,673	NA	107,568	1,505	600	4,077	3,358	NA	NA	1,618	1,740
1989	220,356	93,903	23,653	11,643	NA	40,935	14,469	3,202	1,979	NA	NA	NA	1,979	116,422	NA	114,147	1,647	628	4,429	3,623	NA	NA	1,756	1,867
1990	227,623	92,267	23,469	11,760	NA	38,641	14,885	3,513	2,095	NA	NA	NA	2,095	124,611	NA	122,206	1,745	659	4,772	3,878	NA	NA	1,870	2,007
1991	233,168	88,097	22,102	11,730	NA	34,923	15,460	3,883	2,149	NA	NA	NA	2,149	133,777	NA	131,284	1,799	694	5,011	4,134	NA	NA	1,968	2,166
1992	234,312	86,320	22,465	11,846	NA	31,698	16,335	3,976	2,161	NA	NA	NA	2,161	136,362	NA	133,754	1,870	738	5,057	4,412	NA	NA	2,051	2,361
1993	229,392	83,778	22,880	11,077	NA	28,851	17,034	3,935	2,155	NA	NA	NA	2,155	133,637	NA	130,926	1,926	785	5,133	4,689	NA	NA	2,118	2,571
1994	229,321	82,370	22,166	11,187	NA	27,459	17,612	3,945	2,199	NA	NA	NA	2,199	134,448	NA	131,639	1,973	836	5,337	4,967	NA	NA	2,161	2,806
1995	243,780	83,597	22,441	11,215	NA	28,116	18,045	3,780	2,325	NA	NA	NA	2,325	147,191	NA	144,246	2,054	891	5,456	5,211	NA	NA	2,146	3,065
1996	257,299	82,653	21,623	11,035	NA	27,844	18,363	3,788	2,426	NA	NA	NA	2,426	160,910	NA	157,779	2,179	952	5,783	5,527	NA	NA	2,171	3,355
1997	271,619	82,503	21,560	10,785	NA	27,942	18,353	3,864	2,438	NA	NA	NA	2,438	174,600	NA	171,271	2,293	1,037	6,219	5,859	NA	NA	2,265	3,594
1998	286,282	83,578	22,017	10,754	NA	28,007	18,640	4,160	2,435	NA	NA	NA	2,435	187,390	NA	183,893	2,407	1,089	6,585	6,294	NA	NA	2,373	3,921
1999	305,315	83,453	22,659	10,871	NA	25,599	19,627	4,697	2,544	NA	NA	NA	2,544	205,514	NA	201,828	2,524	1,162	7,061	6,743	NA	NA	2,560	4,183
2000	327,218	82,110	23,504	11,319	NA	20,903	20,876	5,508	2,665	NA	NA	NA	2,665	227,111	NA	223,287	2,579	1,245	7,656	7,675	NA	NA	2,757	4,918
2001	332,570	88,108	26,715	12,006	NA	20,177	22,657	6,552	2,796	27	NA	NA	2,769	224,956	169	221,027	2,531	1,229	8,207	8,504	260	NA	2,939	5,305
2002	326,805	92,749	27,984	13,219	NA	19,286	25,464	6,794	3,002	38	NA	NA	2,965	212,495	159	208,689	2,473	1,174	9,023	9,535	324	NA	3,213	5,999
2003	335,926	98,153	28,803	13,652	NA	20,520	28,324	6,854	3,214	37	NA	NA	3,177	214,643	154	210,902	2,410	1,176	9,553	10,363	283	NA	3,319	6,761
2004	339,690	101,879	27,937	13,993	NA	22,740	29,874	7,335	3,283	34	NA	NA	3,249	214,707	137	210,992	2,410	1,168	9,691	10,130	185	NA	3,358	6,587
2005	353,622	103,723	28,615	14,017	NA	23,817	30,159	7,115	3,236	35	NA	NA	3,202	225,873	152	222,041	2,477	1,203	10,167	10,622	196	NA	3,446	6,980
2006	370,102	105,404	29,784	13,678	111	25,633	29,823	6,374	3,473	32	215	NA	3,227	239,609	181	235,583	2,598	1,247	10,732	10,884	210	NA	3,579	7,094
2007	388,229	108,004	30,676	14,224	138	27,312	29,511	6,143	3,692	33	260	NA	3,399	253,568	185	249,322	2,771	1,291	11,232	11,732	221	NA	3,870	7,641
2008	407,848	118,508	30,066	15,485	178	36,636	29,860	6,283	4,253	33	318	308	3,594	259,975	201	255,488	2,976	1,310	11,827	13,284	210	455	4,193	8,426
2009	402,931	125,765	30,560	16,571	224	39,573	31,741	7,097	4,295	40	381	195	3,679	246,610	184	242,135	3,033	1,258	12,056	14,205	218	490	4,400	9,097
2010	401,673	125,089	31,584	18,187	261	33,786	34,263	7,008	4,250	46	422	154	3,629	245,129	172	240,790	2,917	1,250	12,114	15,091	196	879	4,460	9,555
2011	412,503	122,944	33,830	17,593	264	30,306	34,597	6,354	4,245	29	407	311	3,499	257,883	183	253,508	2,902	1,290	12,684	14,747	173	543	4,482	9,549
2012	412,127	117,700	32,331	16,849	253	29,103	33,234	5,930	3,952	40	379	149	3,384	262,051	176	257,566	3,012	1,298	13,591	14,833	164	452	4,656	9,560
2013	424,610	112,363	31,246	16,178	241	27,463	31,650	5,584	3,970	42	339	181	3,407	277,952	183	273,262	3,156	1,351	14,383	15,943	134	766	4,969	10,074

TABLE 6. U.S. research and development expenditures, by source of funds and performing sector: 1953–2016

Year	All funding sources																								
	Federal								Nonfederal government					Business					Higher education		Other nonprofit organizations				
	All performers	Total	Federal intra-mural	FFRDC	Non-federal government	Business	Higher education	ONP	Total	FFRDC	Non-federal government	Business	Higher education	Total	FFRDC	Business	Higher education	ONP	Higher education	Total	FFRDC	Business	Higher education	ONP	
2014	436,844	108,758	31,961	16,101	227	24,399	30,433	5,637	3,872	24	309	127	3,413	292,544	200	287,639	3,309	1,397	14,901	16,769	126	912	5,238	10,493	
2015 ^a	450,080	109,927	32,427	16,622	226	24,534	30,493	5,625	3,890	17	328	115	3,429	302,881	186	297,774	3,492	1,429	15,756	17,625	125	1,014	5,598	10,888	
2016 ^b	457,715	110,089	34,106	17,135	235	22,184	30,700	5,728	3,971	20	349	123	3,480	308,360	175	303,096	3,647	1,442	16,771	18,524	137	1,079	6,004	11,304	

NA = not available.

FFRDC = federally funded research and development center; ONP = other nonprofit organization.

^a Some data for 2015 are preliminary and may later be revised.

^b The data for 2016 are estimates and will later be revised.

NOTES: This table reaggregates the R&D performer data in Table 2 according to major categories of R&D funding: federal government, nonfederal government (state and local), business, higher education, and other nonprofit organizations. Business sources of R&D funding in this table include the own funds of domestic R&D performing businesses, funds from other domestic businesses, and funds from foreign businesses. For interpretive detail on the R&D performers listed, see Table 2, footnotes a–f. Detail may not add to total because of rounding. Constant-dollar estimates are derived from unrounded data. For trend comparisons, use only the historical data reported in this table, as some back-year data may have been revised. Except for the nonprofit sector, data are based on annual reports by performers in the National Science Foundation's annual R&D expenditure surveys: Business R&D and Innovation Survey, Higher Education R&D Survey, Survey of Federal Funds for R&D, FFRDC R&D Expenditures Survey, and Survey of State Government R&D. R&D expenditures by business performers—and also, before 2001, industry-administered FFRDCs—are collected on a calendar year basis. Expenditures for other performers are calendar year approximations based on fiscal year data (see Table 2, general notes). The 1998–2015 data for ONP R&D performance funded by businesses and the nonprofit sector itself are estimated, based on parameters from the 1996–97 Survey of R&D Funding and Performance by Nonprofit Organizations.

SOURCE: National Science Foundation, National Center for Science and Engineering Statistics, National Patterns of R&D Resources (annual series).