

**Table 369.—Summary of federal funds for research, development, and R&D plant:**  
**Fiscal years 1990 to 1998**  
[In millions]

Item	Actual							Estimate		
	1990	1991	1992	1993	1994	1995	1996	1997	1998	Percent change, 1997 to 1998
1	2	3	4	5	6	7	8	9	10	11
<b>Total outlays for research, development, and R &amp; D plant .....</b>	<b>\$64,276.5</b>	<b>\$64,292.3</b>	<b>\$65,719.0</b>	<b>\$68,385.8</b>	<b>\$68,335.9</b>	<b>\$68,410.0</b>	<b>\$67,756.1</b>	<b>\$70,023.0</b>	<b>\$69,499.9</b>	<b>-0.7</b>
Research and development .....	62,246.8	61,130.4	62,934.5	65,241.3	66,158.8	66,374.6	65,909.9	68,057.5	67,585.1	-0.7
R & D plant .....	2,029.7	3,162.0	2,784.5	3,144.5	2,177.1	2,035.4	1,846.2	1,965.5	1,914.8	-2.6
<b>Total obligations for research, development, and R &amp; D plant .....</b>	<b>65,950.9</b>	<b>64,990.5</b>	<b>68,577.2</b>	<b>70,414.7</b>	<b>69,427.0</b>	<b>71,011.8</b>	<b>69,408.7</b>	<b>71,996.1</b>	<b>71,592.7</b>	<b>-0.6</b>
Research and development obligations .....	63,667.3	61,295.2	65,592.6	67,314.0	67,255.8	68,754.9	67,662.6	69,972.9	69,838.4	-0.2
Performers										
Federal intramural <sup>1</sup> .....	16,002.5	15,238.1	15,690.1	16,556.2	16,139.1	17,342.7	16,596.4	17,438.4	16,806.5	-3.6
Industrial firms .....	29,378.3	26,420.6	29,744.8	30,326.1	30,454.4	30,468.7	30,361.4	31,519.7	31,727.2	0.7
FFRDCs <sup>2</sup> administered by industrial firms .....	2,237.6	2,068.3	2,009.8	1,451.3	1,293.5	1,203.9	1,137.0	1,111.3	1,190.7	7.1
Universities and colleges .....	9,142.2	10,168.5	10,271.2	11,156.1	11,828.7	11,933.0	11,944.7	12,340.6	12,515.0	1.4
FFRDCs <sup>2</sup> administered by universities and colleges .....	3,466.4	3,603.8	3,855.5	3,666.5	3,292.9	3,574.3	3,447.7	3,369.7	3,347.2	-0.7
Other nonprofit institutions .....	2,249.6	2,637.4	2,803.6	2,811.9	2,929.6	2,806.5	2,886.9	2,938.1	3,033.1	3.2
FFRDCs <sup>2</sup> administered by nonprofit institutions .....	632.3	679.4	745.6	753.4	735.5	831.4	754.5	732.1	746.2	1.9
State and local governments .....	213.9	215.1	184.1	320.3	325.4	316.5	246.7	245.2	194.7	-20.6
Foreign .....	344.7	263.9	287.9	272.2	256.6	277.8	287.4	277.7	277.8	0.0
Research obligations .....	21,738.9	23,968.4	24,490.6	26,890.5	27,440.4	28,573.4	28,265.1	29,485.2	30,218.6	2.5
Performers										
Federal intramural <sup>1</sup> .....	5,953.3	6,539.3	6,615.7	7,360.1	7,488.2	7,787.8	7,528.2	7,887.9	8,017.3	1.6
Industrial firms .....	3,199.9	3,406.5	3,451.2	4,018.9	4,063.5	4,727.9	4,291.3	4,601.6	4,760.6	3.5
FFRDCs <sup>2</sup> administered by industrial firms .....	542.7	624.6	592.4	795.8	737.2	818.0	696.2	722.5	751.3	4.0
Universities and colleges .....	8,141.5	8,867.5	9,060.7	9,844.1	10,323.5	10,371.6	10,673.7	11,120.2	11,327.5	1.9
FFRDCs <sup>2</sup> administered by universities and colleges .....	1,808.1	2,160.9	2,351.8	2,347.6	2,181.1	2,235.6	2,386.0	2,404.7	2,506.0	4.2
Other nonprofit institutions .....	1,662.2	1,925.9	2,049.6	2,041.3	2,094.9	2,056.1	2,179.5	2,242.4	2,345.6	4.6
FFRDCs <sup>2</sup> administered by nonprofit institutions .....	148.2	170.9	139.9	173.4	178.0	210.1	195.8	211.2	224.3	6.2
State and local governments .....	126.4	129.3	109.3	211.8	230.8	221.4	187.4	171.7	163.2	-4.9
Foreign .....	156.5	143.4	120.0	97.4	143.3	144.8	126.8	122.8	122.7	-0.1
Fields of science										
Life sciences .....	8,837.8	9,622.0	9,910.5	10,772.1	11,078.8	11,979.0	12,099.7	12,805.0	13,008.5	1.6
Psychology .....	448.6	482.4	298.1	550.7	550.2	653.6	513.0	544.4	544.9	0.1
Physical sciences .....	3,808.7	4,235.3	4,439.2	4,427.0	6,792.7	4,851.2	3,964.4	4,277.7	4,100.1	-4.2
Environmental sciences .....	2,174.1	2,149.8	2,207.6	2,608.5	2,032.0	2,722.9	2,997.0	3,010.6	3,129.2	3.9
Mathematics and computer sciences .....	840.7	903.7	1,150.3	1,225.4	1,242.3	1,667.9	1,554.1	1,675.6	1,959.5	16.9
Engineering .....	4,335.2	4,944.5	4,977.0	5,499.4	4,023.3	4,952.7	5,679.6	5,565.3	5,830.4	4.8
Social sciences .....	630.0	727.3	689.7	674.9	655.0	682.9	674.2	749.1	786.9	5.1
Other sciences .....	663.7	903.4	806.3	1,132.5	1,066.1	1,063.2	783.0	857.4	859.1	0.2
Basic research obligations .....	11,285.6	12,170.8	12,489.9	13,399.1	13,552.9	13,895.5	14,462.4	14,958.7	15,204.7	1.6
Performers										
Federal intramural <sup>1</sup> .....	2,366.0	2,446.5	2,397.0	2,605.1	2,505.0	2,712.9	2,689.2	2,756.4	2,717.6	-1.4
Industrial firms .....	887.5	949.9	920.3	959.2	1,109.1	1,221.2	1,131.0	1,150.7	1,090.4	-5.2
FFRDCs <sup>2</sup> administered by industrial firms .....	175.4	209.1	187.8	237.3	237.6	239.1	272.8	293.6	312.0	6.3
Universities and colleges .....	5,548.2	6,064.5	6,331.8	6,798.5	7,024.2	6,951.3	7,406.1	7,673.9	7,874.9	2.6
FFRDCs <sup>2</sup> administered by universities and colleges .....	1,227.3	1,306.2	1,394.1	1,437.8	1,336.0	1,438.3	1,522.0	1,569.7	1,648.4	5.0
Other nonprofit institutions .....	924.1	1,015.5	1,097.2	1,164.9	1,125.7	1,134.2	1,235.2	1,303.0	1,330.8	2.1
FFRDCs <sup>2</sup> administered by nonprofit institutions .....	59.2	80.8	65.5	71.3	73.9	75.2	76.5	83.0	103.8	25.0
State and local governments .....	50.4	49.1	42.4	71.7	75.2	78.7	80.2	78.1	75.6	-3.3
Foreign .....	47.6	49.1	53.8	53.3	66.1	44.5	49.5	50.3	51.3	2.0
Fields of science										
Life sciences .....	5,177.5	5,433.6	5,841.7	6,288.8	6,429.8	6,746.7	6,911.0	7,315.2	7,393.9	1.1
Psychology .....	215.1	225.5	122.6	246.8	247.4	279.8	281.5	298.2	302.0	1.3
Physical sciences .....	2,661.5	2,881.5	2,951.4	2,907.1	3,649.2	2,709.3	2,901.7	3,115.0	2,962.4	-4.9
Environmental sciences .....	1,274.8	1,263.5	1,303.6	1,533.5	997.2	1,410.7	1,531.2	1,514.8	1,507.9	-0.5
Mathematics and computer sciences .....	406.9	426.1	481.4	511.3	503.6	626.1	622.0	733.5	760.7	3.7
Engineering .....	1,101.5	1,233.7	1,249.8	1,207.4	1,061.7	1,432.2	1,606.6	1,338.8	1,612.5	20.4
Social sciences .....	146.0	161.4	139.9	194.1	191.7	210.8	230.0	237.5	252.4	6.3
Other sciences .....	302.3	545.6	399.4	510.1	472.4	479.9	378.3	405.7	412.9	1.8
Applied research obligations .....	10,453.3	11,797.6	12,000.7	13,491.4	13,887.5	14,677.9	13,802.7	14,526.5	15,013.9	3.4
Performers										
Federal intramural <sup>1</sup> .....	3,587.3	4,092.8	4,218.7	4,755.0	4,983.2	5,074.9	4,839.0	5,131.4	5,299.7	3.3
Industrial firms .....	2,312.4	2,456.6	2,530.9	3,059.7	2,954.4	3,506.7	3,160.3	3,451.0	3,670.2	6.4
FFRDCs <sup>2</sup> administered by industrial firms .....	367.3	415.5	404.6	558.6	499.6	578.9	423.4	428.9	439.3	2.4
Universities and colleges .....	2,593.4	2,803.0	2,728.9	3,045.5	3,299.3	3,420.3	3,267.6	3,446.4	3,452.6	0.2
FFRDCs <sup>2</sup> administered by universities and colleges .....	580.8	854.7	957.6	909.8	845.1	797.3	864.0	835.0	857.6	2.7
Other nonprofit institutions .....	738.1	910.4	952.5	876.4	969.2	921.9	944.3	939.4	1,014.8	8.0
FFRDCs <sup>2</sup> administered by nonprofit institutions .....	89.0	90.1	74.5	102.2	104.0	134.9	119.4	128.2	120.6	-6.0
State and local governments .....	76.1	80.2	66.9	140.1	155.5	142.7	107.3	93.6	87.7	-6.3
Foreign .....	109.0	94.3	66.2	44.1	77.2	100.3	77.4	72.5	71.4	-1.5
Fields of science										
Life sciences .....	3,660.3	4,188.4	4,068.8	4,483.3	4,649.0	5,232.3	5,188.7	5,489.8	5,614.6	2.3
Psychology .....	233.5	258.9	175.6	303.9	302.9	373.9	231.5	246.2	242.9	-1.3
Physical sciences .....	1,147.2	1,353.9	1,467.7	1,519.8	3,143.5	2,141.9	1,062.7	1,162.7	1,137.6	-2.2
Environmental sciences .....	899.3	886.3	904.0	1,075.0	1,034.8	1,312.3	1,465.8	1,495.8	1,621.3	8.4
Mathematics and computer sciences .....	433.9	477.6	678.9	714.1	738.7	1,041.7	932.1	942.2	1,198.8	27.2
Engineering .....	3,233.7	3,710.8	3,727.1	4,292.0	2,961.6	3,520.5	4,073.0	4,226.4	4,217.9	-0.2

**Table 369.—Summary of federal funds for research, development, and R&D plant:  
Fiscal years 1990 to 1998—Continued**  
[In millions]

Item	Actual							Estimate		
	1990	1991	1992	1993	1994	1995	1996	1997	1998	Percent change, 1997 to 1998
1	2	3	4	5	6	7	8	9	10	11
Social sciences .....	484.0	566.0	549.8	480.8	463.3	472.0	444.2	511.6	534.5	4.5
Other sciences .....	361.5	357.8	406.8	622.4	593.8	583.3	404.7	451.7	446.1	-1.2
Development obligations .....	41,928.4	37,326.8	41,102.0	40,423.5	39,815.4	40,181.4	39,397.5	40,487.7	39,619.8	-2.1
Performers										
Federal intramural <sup>1</sup> .....	10,049.2	8,698.8	9,074.4	9,196.2	8,650.9	9,554.9	9,068.1	9,550.5	8,789.1	-8.0
Industrial firms .....	26,178.4	23,014.1	26,293.6	26,307.2	26,390.9	25,740.7	26,070.1	26,918.1	26,966.6	0.2
FFRDCs <sup>2</sup> administered by industrial firms .....	1,694.9	1,443.7	1,417.4	655.5	556.3	385.9	440.7	388.9	439.4	13.0
Universities and colleges .....	1,000.5	1,301.0	1,210.6	1,312.0	1,505.2	1,561.4	1,271.0	1,220.4	1,187.5	-2.7
FFRDCs <sup>2</sup> administered by universities and colleges .....	1,658.3	1,442.9	1,503.7	1,318.9	1,111.8	1,338.7	1,061.6	965.0	841.2	-12.8
Other nonprofit institutions .....	587.4	711.5	753.9	770.6	834.8	750.4	707.4	695.7	687.5	-1.2
FFRDCs <sup>2</sup> administered by nonprofit institutions .....	484.0	508.5	605.7	580.0	557.6	621.3	558.7	520.8	521.9	0.2
State and local governments .....	87.5	85.8	74.8	108.5	94.7	95.1	59.3	73.5	31.5	-57.2
Foreign .....	188.1	120.5	167.9	174.8	113.3	133.0	160.5	154.8	155.1	0.2
R & D plant obligations .....	2,283.6	3,695.4	2,984.6	3,100.7	2,171.2	2,256.9	1,746.1	2,023.3	1,754.3	-13.3
Performers										
Federal intramural <sup>1</sup> .....	359.9	461.1	506.2	432.0	392.6	482.6	405.1	678.4	508.5	-25.0
Industrial firms .....	884.0	1,889.2	1,014.4	1,048.2	746.8	696.6	465.4	464.8	372.9	-19.8
FFRDCs <sup>2</sup> administered by industrial firms .....	231.0	279.6	202.2	124.4	119.4	95.1	43.9	54.9	53.5	-2.5
Universities and colleges .....	155.8	253.3	241.5	361.4	209.0	323.8	243.1	187.1	120.3	-35.7
FFRDCs <sup>2</sup> administered by universities and colleges .....	495.8	624.6	579.5	619.5	608.8	543.9	497.8	564.0	671.3	19.0
Other nonprofit institutions .....	121.3	154.6	393.9	415.6	20.9	25.6	23.4	15.6	6.7	-57.2
FFRDCs <sup>2</sup> administered by nonprofit institutions .....	31.4	19.7	46.3	65.5	72.9	62.6	66.1	57.9	20.6	-64.5
State and local governments .....	0.5	0.6	0.5	0.5	0.8	0.5	1.0	0.5	0.5	0.0
Foreign .....	3.9	12.8	0.0	33.4	0.2	26.1	0.5	0.0	0.0	0.0

<sup>1</sup> Includes costs associated with the administration of intramural and extramural programs by federal personnel as well as actual intramural performance.

<sup>2</sup> Federally funded research and development centers.

NOTE.—Some data have been revised from previously published figures. Because of rounding, details may not add to totals.

SOURCE: National Science Foundation, *Federal Funds for Research and Development*, various years. (This table was prepared May 1998.)