

TABLE 20

**Companies with domestic R&D paid for by the company and others and performed by the company in the biotechnology focus area, by industry and company size: 2019**

(Millions of U.S. dollars and number)

Industry and company size	NAICS code	Domestic R&D		Biotechnology R&D							
		Companies <sup>a</sup> (number)	Amount	Total		Paid for by the company			Paid for by others		
				Companies <sup>b</sup> (number)	Amount	Companies <sup>b</sup> (number)	Amount	Companies <sup>b</sup> (number)	Amount		
All industries	21-23, 31-33, 42-81	28,270	492,956	2,470	i 77,792	2,010	i 62,952	780	i 14,841		
Manufacturing industries	31-33	15,180	285,674	1,700	i 65,874	1,530	i 60,655	380	i 5,219		
Food	311	870	4,180	110	i 705	100	i 657	30	i 48		
Beverage and tobacco products	312	350	1,082	30	i 24 - 41	30	i 25	10	i 0 - 16		
Textile, apparel, and leather products	313-16	240	904	10	*	10	*	0	0		
Wood products	321	80	186	10	i 10	10	i 10	0	0		
Paper	322	90	1,064	10	2	10	2	0	0		
Printing and related support activities	323	200	420	i 0	0	0	0	0	0		
Petroleum and coal products	324	80	1,306	10	142 - 159	10	143	10	0 - 16		
Chemicals	325	2,330	97,063	940	60,577	870	55,562	220	5,015		
Basic chemicals	3251	240	2,360	50	i 370	50	i 254	10	116		
Resin, synthetic rubber, and artificial synthetic fibers and filaments	3252	180	1,172	20	i 94	20	i 94	0	0		
Pesticide, fertilizer, and other agricultural chemicals	3253	150	1,822 - 1,846	80	i 154 - 295	80	i 155	10	0 - 139		
Pharmaceuticals and medicines	3254	1,060	87,619	770	59,736	700	54,974	210	4,761		
Soap, cleaning compound, and toilet preparation	3256	270	2,760	40	i 79 - 220	40	i 80	10	0 - 139		
Paint, coating, adhesive, and other chemicals	3255, 3259	460	1,305 - 1,333	10	5	10	5	0	0		
Plastics and rubber products	326	790	2,856	50	i 55	50	i 55	0	0		
Nonmetallic mineral products	327	170	1,508	i 10	*	10	*	0	0		
Primary metals	331	200	665	10	2	10	2	0	0		
Fabricated metal products	332	1,840	2,885	10	9	10	9	0	0		
Machinery	333	2,240	15,184	80	i 40	30	24	50	i 16		
Agricultural implement	33311	190	1,921	10	*	10	*	0	0		
Semiconductor machinery	333242	80	4,459	0	0	0	0	0	0		
Engine, turbine, and power transmission equipment	3336	110	1,301	0	0	0	0	0	0		
Other machinery	other 333	1,880	7,503	70	i 39	30	23	50	i 16		
Computer and electronic products	334	2,280	86,729	200	i 2,506	170	i 2,435	70	i 70		
Communications equipment	3342	300	12,595	10	0 - 48	10	0 - 48	0	0		
Semiconductor and other electronic components	3344	640	35,183	i 10	1	10	1	0	0		
Navigational, measuring, electromedical, and control instruments	3345	1,140	17,562	190	i 2,456	160	i 2,388	60	i 68		

TABLE 20

**Companies with domestic R&D paid for by the company and others and performed by the company in the biotechnology focus area, by industry and company size: 2019**

(Millions of U.S. dollars and number)

Industry and company size	NAICS code	Biotechnology R&D											
		Domestic R&D		Total		Paid for by the company		Paid for by others					
		Companies <sup>a</sup> (number)	Amount	Companies <sup>b</sup> (number)	Amount	Companies <sup>b</sup> (number)	Amount	Companies <sup>b</sup> (number)	Amount				
Electromedical, electrotherapeutic, and irradiation apparatus	334510, 334517	230	3,342	100	i 1,830	100	i 1,772	30	i 58				
Search, detection, navigation, guidance, aeronautical, and nautical system and instrument	334511	190	9,662	10	i 320	10	i 320	0					
Other measuring and controlling device	other 3345	740	4,558	100	i 307	70	i 297	40	i 10				
Other computer and electronic products	other 334	220	21,388	10	1 - 50	10	0 - 48	10	i 2				
Electrical equipment, appliances, and components	335	900	5,263	10	12	10	12	10					*
Transportation equipment	336	1,090	45,375	10	48	10	48	0					0
Motor vehicles, bodies, trailers, and parts	3361-63	540	24,117	10	24	10	24	0					0
Aerospace products and parts	3364	380	i 18,358	10	24	10	24	0					0
Aircraft, aircraft engine, and aircraft parts	336411-13	200	i 16,891	10	17	10	17	0					0
Guided missile, space vehicle, and related parts	336414-15, 336419	190	i 1,467	10	i 7	10	i 7	0					0
Military armored vehicle, tank, and tank component	336992	30	35	0	0	0	0	0					0
Other transportation	other 336	150	2,865	0	0	0	0	0					0
Furniture and related products	337	190	409	0	0	0	0	0					0
Miscellaneous	339	1,310	18,596	280	i 1,727	270	i 1,670	40	i 57				i
Medical equipment and supplies	3391	790	16,014	270	i 1,621	260	i 1,564	40	i 57				i
Other miscellaneous manufacturing	3399	520	2,582	10	106	10	106	0					0
Nonmanufacturing industries	21-23, 42-81	13,100	207,283	780	i 11,919	490	i 2,297	400	i 9,622				i
Mining, quarrying, oil and gas extraction, and support activities	21	160	2,717	10	i 1 - 16	10	0 - 13	10	i 2				
Utilities	22	40	275	0	0	0	0	0					0
Wholesale trade	42	1,560	1,191	10	i 5	10	i 5	0					0
Electronic shopping and electronic auctions	454111-12	60	3,131 - 15,818	0	0	0	0	0					0
Transportation and warehousing	48-49	130	9,890	i 10	2	10	2	0					0
Information	51	3,090	110,227	40	86	40	80	10					6
Publishing	511	1,080	33,019	30	58	20	54	10	i 5				
Newspaper, periodical, book, and directory publishers	5111	40	61	0	0	0	0	0					0
Software publishers	5112	1,040	32,958	30	58	20	54	10	i 5				

TABLE 20

**Companies with domestic R&D paid for by the company and others and performed by the company in the biotechnology focus area, by industry and company size: 2019**

(Millions of U.S. dollars and number)

Industry and company size	NAICS code	Domestic R&D		Biotechnology R&D						
		Companies <sup>a</sup> (number)	Amount	Total		Paid for by the company		Paid for by others		
				Companies <sup>b</sup> (number)	Amount	Companies <sup>b</sup> (number)	Amount	Companies <sup>b</sup> (number)	Amount	
Telecommunications	517	210	3,733	0	0	0	0	0	0	0
Data processing, hosting, and related services	518	1,480	30,558	20	26	20	25	10	1	
Other information	other 51	340	42,917	10	2	10	2	0	0	
Finance and insurance	52	220	8,917	0	0	0	0	0	0	
Real estate and rental and leasing	53	50	1,371	0	0	0	0	0	0	
Lessors of nonfinancial intangible assets (except copyrighted works)	533	20	45	0	0	0	0	0	0	
Other real estate and rental and leasing	other 53	30	1,326	0	0	0	0	0	0	
Professional, scientific, and technical services	54	6,500	53,233	700	10,971	410	1,473	390	9,498	
Architectural, engineering, and related services	5413	1,450	4,207	120	93	30	39	90	54	
Computer systems design and related services	5415	3,020	21,046	20	33	20	33	0	0	
Scientific research and development services	5417	1,230	21,669	530	10,747	340	1,311	280	9,436	
Research and development in biotechnology	541711	310	6,457	270	4,556	170	861	150	3,695	
Research and development in the physical, engineering, and life sciences (except biotechnology)	541712	900	14,446	260	6,061	180	450	130	5,611	
Research and development in the social sciences and humanities	541720	30	766	10	130	0	0	10	130	
Other professional, scientific, and technical services	other 54	810	6,312	50	98	30	89	20	9	
Health care services	621-23	680	2,265	30	838	30	727	10	111	
Other nonmanufacturing	23, 44-45 (excluding 454111-12), 55-56, 624, 71-72, 81	680	1,380 - 14,067	10	3 - 18	10	0 - 13	10	4	
All companies (number of domestic employees)	-	28,270	492,956	2,470	77,792	2,010	62,952	780	14,841	
Small companies										
10-19 <sup>c</sup>	-	5,490	5,501	570	1,224	420	921	220	302	
20-49	-	7,980	12,418	660	2,801	530	2,262	240	538	
Medium companies										
50-99	-	4,960	14,021	440	5,075	370	4,334	130	741	
100-249	-	4,580	19,793	320	4,736	270	3,992	100	743	

TABLE 20

**Companies with domestic R&D paid for by the company and others and performed by the company in the biotechnology focus area, by industry and company size: 2019**

(Millions of U.S. dollars and number)

Industry and company size	NAICS code	Biotechnology R&D									
		Domestic R&D		Total		Paid for by the company		Paid for by others			
		Companies <sup>a</sup> (number)	Amount	Companies <sup>b</sup> (number)	Amount	Companies <sup>b</sup> (number)	Amount	Companies <sup>b</sup> (number)	Amount		
Large companies											
250–499	–	2,140	18,883	190	4,708	180	4,022	40	686	i	
500–999	–	1,230	23,969	80	5,148	70	4,552	20	596	i	
1,000–4,999	–	1,330	75,671	140	10,329	130	8,035	30	2,294	i	
5,000–9,999	–	240	50,811	30	11,326	30	7,801	10	3,525	i	
10,000–24,999	–	220	88,263	40	22,815	40	18,655	20	4,159		
25,000 or more	–	130	183,626	20	9,631	20	8,376	10	1,255		

\* = amount &lt; \$500,000; i = &gt; 50% of the estimate is a combination of imputation and reweighting to account for nonresponse.

NAICS = 2012 North American Industry Classification System.

<sup>a</sup> Beginning in survey year 2018, these statistics include an adjustment to the weight to account for unit nonresponse; beginning in survey year 2019, these company count estimates reflect a change in rounding methodology.<sup>b</sup> Beginning in survey year 2018, these statistics include an adjustment to the weight to account for unit nonresponse; beginning in survey year 2019, these company count estimates reflect a change in rounding methodology. These company count estimates also reflect an imputation process implemented for survey year 2014. This change has affected the comparability of these company count estimates with estimates published for years prior to 2014.<sup>c</sup> The Business Enterprise Research and Development Survey does not include companies with fewer than 10 domestic employees.**Note(s):**

Detail may not add to total because of rounding. Industry classification is based on the dominant business code for domestic R&amp;D performance, where available. For companies that did not report business codes, the classification used for sampling was assigned. Beginning in survey year 2018, statistics are representative of companies located in the United States that performed or funded \$50,000 or more of R&amp;D. This change has affected the comparability of these estimates with estimates published for years prior to 2018. Companies could report R&amp;D in one, more than one, or no application area. An estimate range may be displayed in place of a single estimate to avoid disclosing operations of individual companies.

**Source(s):**

National Center for Science and Engineering Statistics and Census Bureau, Business Enterprise Research and Development Survey, 2019.