

TABLE 45

Total and federally financed higher education R&D expenditures in the biological and biomedical sciences, ranked by FY 2022 total: FYs 2019–22

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2019	2020	2021	2022	2019	2020	2021	2022
All institutions	-	15,390,991	15,766,819	16,566,463	18,161,442	9,261,749	9,337,678	10,006,403	10,949,628
U. Pennsylvania	1	743,835	780,497	835,864	936,939	390,906	390,309	434,661	475,926
Harvard U.	2	536,371	534,656	539,289	561,958	337,304	325,366	308,919	309,766
Scripps Research Institute	3	427,734	444,964	485,435	492,639	267,122	243,502	272,181	242,135
Icahn School of Medicine at Mount Sinai	4	359,149	359,900	391,642	411,941	198,767	208,188	235,660	261,518
Baylor C. of Medicine	5	298,881	311,546	345,012	400,058	171,688	166,676	196,635	222,712
U. Southern California	6	140,622	132,168	117,462	398,478	93,324	91,893	82,518	172,487
Washington U., Saint Louis	7	354,062	359,856	389,457	389,199	211,425	216,565	237,968	260,132
Johns Hopkins U. ^a	8	326,327	311,295	350,122	358,980	228,297	221,384	269,831	273,011
Cornell U.	9	314,443	311,954	317,690	356,105	146,718	153,222	164,967	174,559
U. Pittsburgh, Pittsburgh	10	294,582	294,183	304,345	353,030	189,292	189,410	206,387	243,501
Rockefeller U.	11	318,581	322,734	325,035	328,999	75,507	78,153	87,220	87,168
U. Texas M. D. Anderson Cancer Center	12	289,848	304,198	320,834	326,187	74,738	64,702	73,202	73,169
U. Washington, Seattle	13	257,677	260,831	286,353	322,882	152,127	153,375	168,960	180,761
New York U.	14	250,281	250,446	297,690	321,462	138,450	147,771	177,500	202,644
U. Wisconsin-Madison	15	261,715	277,654	273,356	318,077	161,268	162,347	159,456	199,721
Duke U.	16	237,097	245,327	291,851	289,829	189,808	195,787	236,697	242,664
U. Michigan, Ann Arbor	17	258,013	266,507	262,263	266,722	176,626	180,703	185,914	198,644
Stanford U.	18	189,727	228,842	242,245	265,253	150,221	179,023	185,954	196,494
U. Virginia, Charlottesville	19	212,843	230,231	229,238	249,817	118,802	128,995	130,255	143,465
Columbia U. in the City of New York	20	196,254	206,509	226,903	249,393	158,280	168,917	186,401	198,164
Emory U.	21	187,084	182,193	203,597	228,756	148,788	144,201	161,290	186,219
Yale U.	22	208,829	206,929	222,114	226,285	141,401	140,048	150,159	158,700
U. Texas Southwestern Medical Center	23	177,357	214,795	219,742	223,987	75,227	88,551	100,990	112,127
U. North Carolina, Chapel Hill	24	165,804	167,907	191,773	222,099	125,292	123,492	143,283	156,412
U. Arizona	25	200,691	212,741	221,774	218,490	96,689	101,105	115,658	110,999
Rutgers, State U. New Jersey, New Brunswick	26	91,356	113,712	90,875	214,943	52,365	57,418	54,432	134,409
U. California, Davis	27	224,044	218,316	199,310	211,134	140,036	136,739	120,744	136,955
U. Kentucky	28	178,030	175,026	181,729	204,821	92,761	93,567	101,455	111,422
Vanderbilt U. and Vanderbilt U. Medical Center	29	172,681	183,620	206,202	194,205	102,998	109,381	121,941	127,970
U. Maryland ^b	30	152,853	166,254	183,621	193,170	104,187	114,209	116,912	122,265
Boston U.	31	150,669	163,939	168,310	189,654	98,855	110,627	112,638	124,668
Northwestern U.	32	141,523	153,629	166,594	189,086	92,458	99,378	115,175	129,866
U. Alabama, Birmingham	33	137,196	132,963	132,380	167,234	99,731	98,997	100,726	101,964
U. Georgia	34	140,018	143,796	156,208	167,001	72,403	78,657	90,936	102,961

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U. Texas Medical Branch	35	130,473	137,316	139,580	154,731	79,850	86,048	85,905	92,808
U. Massachusetts, Medical School	36	134,842	137,103	145,417	153,954	98,979	96,954	100,459	106,862
U. Florida	37	143,488	125,655	134,050	148,797	70,530	61,336	66,696	73,499
U. California, Berkeley	38	104,849	130,392	129,502	138,783	57,666	67,501	65,808	76,387
Indiana U., Bloomington	39	116,176	124,207	122,903	137,850	79,405	80,025	82,191	86,181
U. Iowa	40	122,729	126,870	134,116	132,705	73,711	78,419	80,979	85,296
U. California, Irvine	41	103,711	114,449	125,642	130,710	61,632	64,157	75,077	86,211
Ohio State U.	42	76,202	83,715	92,910	128,503	51,272	58,581	65,420	83,337
U. Minnesota, Twin Cities	43	101,129	111,883	118,493	126,554	55,639	63,674	75,180	81,077
North Carolina State U.	44	120,567	120,671	119,614	123,482	44,058	42,625	47,017	48,244
Thomas Jefferson U.	45	73,544	74,942	83,083	123,144	42,959	42,244	49,473	72,604
Michigan State U.	46	119,653	117,715	117,739	117,176	60,584	61,131	62,624	65,574
Cold Spring Harbor Laboratory	47	125,151	113,394	112,613	115,922	72,319	60,487	54,682	57,058
U. Connecticut	48	69,141	75,806	79,715	105,565	46,453	49,480	52,731	79,695
Pennsylvania State U., University Park and Hershey Medical Center	49	84,873	98,382	112,135	105,362	51,335	56,971	63,659	71,191
U. South Florida ^c	50	115,159	90,898	93,020	103,543	85,703	64,867	64,801	73,304
Tufts U.	51	80,921	92,119	91,403	102,498	58,033	69,674	71,168	76,869
U. Nebraska, Medical Center	52	103,618	105,620	99,830	102,327	70,813	70,536	71,474	72,482
Princeton U.	53	87,248	81,137	87,346	102,181	52,855	50,581	52,315	52,108
Texas A&M U., College Station and Health Science Center	54	72,472	77,408	97,519	99,831	46,051	50,356	55,631	62,196
California Institute of Technology	55	84,558	89,580	100,578	98,392	60,603	65,017	67,730	71,660
Medical C. Wisconsin	56	80,531	83,882	83,895	98,248	45,066	47,297	49,607	53,829
SUNY, U. Buffalo	57	82,365	88,070	95,200	95,707	42,370	47,604	51,230	57,523
Arizona State U.	58	67,597	63,293	73,598	95,701	31,588	35,741	40,918	50,639
U. Illinois, Urbana-Champaign	59	66,393	77,458	91,434	93,256	39,824	44,234	54,744	57,463
U. Chicago	60	86,619	83,295	82,092	91,684	66,862	67,334	66,653	77,479
Case Western Reserve U.	61	77,957	82,470	86,328	91,552	65,059	69,339	71,246	75,637
Dartmouth C. and Dartmouth Hitchcock Medical Center	62	90,029	84,528	83,974	89,693	48,255	49,057	53,355	53,746
U. Miami	63	67,787	78,338	75,792	89,556	56,865	64,201	62,744	75,332
U. Texas Health Science Center, San Antonio	64	62,855	67,851	74,729	80,739	42,261	49,214	48,445	53,942
Van Andel Research Institute	65	61,738	58,982	65,789	78,626	18,259	18,538	22,231	29,424
U. Illinois, Chicago	66	74,126	81,071	77,533	77,134	45,838	42,919	41,820	42,064
Colorado State U., Fort Collins	67	40,348	39,769	67,310	74,575	25,346	23,865	37,530	41,838
Virginia Commonwealth U.	68	50,240	53,656	72,971	72,614	39,483	40,720	47,612	47,604
U. Louisville	69	55,219	60,608	66,095	71,947	39,225	39,447	44,936	51,331

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U. Texas, Austin	70	58,063	62,802	72,413	71,830	39,470	38,317	44,438	45,637
Louisiana State U., Baton Rouge	71	57,732	56,483	60,515	71,438	28,862	26,797	29,672	33,532
George Washington U.	72	54,126	52,902	58,491	69,589	35,141	33,137	39,381	47,496
U. Louisiana, Lafayette	73	16,539	68,528	60,760	67,016	5,706	11,539	16,125	16,403
Medical U. South Carolina	74	67,708	62,475	64,300	66,799	51,154	49,032	51,796	53,320
U. Cincinnati	75	58,504	62,270	60,204	63,666	30,186	35,074	34,328	36,168
U. Rochester	76	53,241	54,066	56,944	61,720	43,634	44,908	48,117	50,613
U. Vermont	77	46,795	54,565	51,579	61,287	35,346	37,701	35,980	41,145
Brown U.	78	51,017	57,280	57,160	60,922	37,878	41,143	43,126	44,492
SUNY, Stony Brook U.	79	60,050	61,121	64,217	60,840	37,657	39,569	40,518	40,425
U. Hawaii, Manoa	80	54,997	53,100	52,760	60,677	18,542	16,953	19,052	30,300
U. California, Riverside	81	58,738	60,674	60,318	60,605	19,808	25,037	24,845	29,798
U. Texas Health Science Center, Houston	82	55,055	54,213	54,224	59,833	38,689	35,502	36,466	40,894
U. California, San Diego	83	64,858	62,532	63,846	59,696	36,228	36,347	45,133	46,028
Georgia State U.	84	48,140	50,131	52,370	59,500	23,302	24,615	26,909	29,839
U. Arkansas for Medical Sciences	85	52,686	67,447	64,136	58,106	32,967	38,357	34,745	39,773
Massachusetts Institute of Technology	86	82,262	67,446	60,795	56,438	44,519	42,112	37,649	33,137
U. Missouri, Columbia	87	55,276	50,323	51,630	56,404	41,455	39,472	35,810	40,162
U. Oklahoma, Norman and Health Science Center	88	37,322	43,605	48,670	50,190	23,109	28,155	32,725	29,099
Virginia Polytechnic Institute and State U.	89	46,123	40,276	46,515	49,745	18,532	15,769	18,558	20,642
Cleveland State U.	90	40,075	43,464	41,447	48,744	35,061	40,320	37,018	41,712
Florida International U.	91	33,053	39,760	37,940	46,249	16,837	19,181	17,524	22,144
U. Kansas	92	62,491	62,277	46,912	46,127	38,434	38,670	30,741	31,227
U. Colorado Boulder	93	41,686	41,081	42,368	46,086	35,165	34,958	36,680	38,408
Augusta U.	94	36,815	40,513	41,967	45,192	24,358	29,605	29,845	31,479
Tulane U.	95	30,686	39,053	36,099	45,028	22,410	26,219	25,730	31,753
U. Oregon	96	34,751	33,631	37,907	44,968	28,993	28,932	28,980	36,500
Oregon State U.	97	34,305	38,938	44,339	43,217	24,413	27,860	32,710	30,314
Iowa State U.	98	56,405	39,072	42,898	42,147	26,626	18,255	17,834	18,729
Drexel U.	99	41,484	38,200	39,937	40,343	25,535	24,521	26,987	26,035
U. Nevada, Reno	100	32,985	36,791	43,521	39,371	17,099	18,123	25,242	23,391
U. California, Los Angeles	101	38,154	34,022	33,765	37,544	24,564	22,266	21,562	23,114
Temple U.	102	47,651	43,913	44,630	36,172	34,253	34,298	29,114	20,679
U. Tennessee, Health Science Center	103	18,079	22,245	29,655	35,849	14,535	19,859	23,001	26,143
U. Notre Dame	104	26,385	27,095	29,214	35,115	13,259	11,155	12,920	15,704

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U. Texas Health Science Center, Tyler	105	19,606	21,265	27,928	33,872	7,084	7,732	12,007	14,362
U. Tennessee, Knoxville ^d	106	17,425	22,643	26,252	33,638	8,087	10,968	13,709	20,233
Washington State U.	107	41,122	35,845	34,771	32,110	25,006	21,674	23,178	21,086
SUNY, U. Albany	108	32,595	27,543	29,137	31,346	19,522	17,227	18,406	21,007
West Virginia U.	109	18,919	25,158	30,824	31,046	9,967	12,150	16,135	15,616
SUNY, Downstate Health Sciences U.	110	35,422	32,389	33,935	30,468	26,744	26,171	27,284	25,081
Northern Arizona U.	111	26,194	23,741	25,623	30,320	18,081	15,010	17,143	19,381
U. Nebraska, Lincoln	112	29,626	30,234	31,798	30,056	11,404	12,887	14,643	12,972
Wayne State U.	113	30,203	24,007	26,291	28,121	18,330	14,506	16,595	19,785
U. Utah	114	16,890	40,013	44,662	27,988	10,592	24,860	28,068	26,785
U. New Mexico	115	30,297	28,740	27,380	27,705	25,369	23,802	22,646	22,603
Purdue U., West Lafayette	116	25,238	34,790	25,488	27,675	12,048	13,534	13,625	13,382
U. Massachusetts, Amherst	117	24,678	25,906	25,498	27,376	14,835	15,754	16,284	17,268
U. California, Santa Cruz	118	23,762	24,318	25,050	26,829	15,861	16,755	17,420	18,557
U. Mississippi	119	33,394	15,866	22,359	26,692	26,331	11,028	19,215	21,528
Oklahoma State U., Stillwater	120	19,934	19,956	25,945	26,166	7,680	7,699	10,218	10,421
Clemson U.	121	25,381	28,361	24,231	26,009	8,049	8,494	7,601	9,073
Saint Louis U.	122	25,209	27,623	28,234	25,694	13,370	13,489	13,620	13,688
Brandeis U.	123	22,063	26,272	28,082	25,632	19,823	20,298	20,128	19,143
Georgia Institute of Technology	124	24,989	18,410	21,357	25,448	15,498	9,186	11,572	14,130
Kansas State U.	125	30,002	30,940	26,459	25,276	13,583	14,289	10,615	10,804
U. Idaho	126	19,378	22,764	25,070	24,647	13,092	17,044	19,286	18,297
Oregon Health and Science U.	127	150,395	26,551	21,651	24,166	122,388	20,651	17,330	19,214
U. Montana, Missoula	128	20,283	22,464	21,407	23,548	11,575	15,437	14,945	17,390
Florida State U.	129	24,383	22,836	21,063	22,715	13,487	12,479	10,937	11,397
U. Texas, San Antonio	130	20,972	23,733	23,479	22,618	11,309	9,925	10,784	12,418
U. Wyoming	131	13,913	14,659	15,284	22,214	11,223	13,246	14,012	19,594
U. Texas, El Paso	132	20,446	16,280	16,281	21,382	9,607	8,015	10,380	12,241
Texas Tech U., Health Sciences Center	133	20,207	21,528	20,394	21,246	7,666	9,477	8,118	7,988
George Mason U.	134	9,520	25,142	37,805	20,571	6,580	5,178	5,399	6,316
U. South Carolina, Columbia	135	13,120	21,174	14,237	19,230	10,225	10,663	9,864	11,314
Texas Tech U.	136	14,796	12,709	14,152	18,732	2,663	1,723	1,621	3,833
Florida Atlantic U.	137	13,061	16,997	18,879	18,712	3,616	6,357	6,611	6,104
U. North Dakota	138	16,722	17,478	17,556	18,631	7,707	8,147	9,103	10,098
New Mexico State U.	139	7,688	9,867	15,045	18,584	6,605	8,253	13,212	16,255

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U. Central Florida	140	13,148	15,378	15,562	18,380	8,324	10,063	10,666	10,111
Rice U.	141	13,966	16,008	15,766	18,013	8,245	8,540	7,628	9,357
Meharry Medical C.	142	18,286	13,870	15,840	17,895	16,443	12,573	13,784	14,983
Auburn U., Auburn	143	13,317	15,224	14,099	17,753	5,412	5,918	5,996	8,836
SUNY, Upstate Medical U.	144	15,003	14,671	16,959	17,483	11,886	10,783	12,320	12,585
Northeastern U.	145	14,380	14,718	13,919	17,086	10,474	12,023	11,399	13,886
Montana State U., Bozeman	146	19,659	19,994	18,017	16,954	14,355	14,059	12,653	12,075
U. Alaska, Fairbanks	147	7,064	12,603	24,022	16,875	4,540	10,426	19,159	13,094
U. California, Santa Barbara	148	27,718	24,077	22,132	16,733	15,351	12,288	11,506	10,601
Loyola U., Chicago	149	14,788	15,804	16,741	16,600	10,413	11,042	12,636	12,644
U. Rhode Island	150	13,997	18,161	17,614	15,848	11,877	15,256	15,150	14,387
Albany Medical C.	151	16,236	17,150	16,121	15,847	11,220	12,263	12,700	12,816
U. Nevada, Las Vegas	152	10,027	12,763	12,969	14,714	6,140	8,177	7,772	7,450
U. Colorado Anschutz Medical Campus ^e	153	na	na	8,948	14,636	na	na	4,008	3,917
San Diego State U.	154	12,720	14,602	15,520	14,527	5,833	6,374	5,985	4,723
Louisiana State U., Health Sciences Center, Shreveport	155	11,230	10,644	10,898	14,437	9,918	9,794	10,192	13,388
Carnegie Mellon U.	156	12,103	12,566	12,858	13,497	7,540	8,344	8,160	7,785
Eastern Virginia Medical School	157	8,746	9,968	9,234	12,924	6,015	6,821	6,620	8,868
Georgetown U.	158	14,202	14,827	12,828	12,526	10,309	9,790	8,536	8,490
U. South Dakota	159	16,612	15,109	13,982	12,452	9,315	9,131	7,905	9,224
U. Maryland, Baltimore County	160	8,282	9,422	8,953	12,314	7,244	7,913	7,243	8,463
Texas State U.	161	6,761	7,213	10,644	11,937	1,230	1,103	3,400	4,378
San Francisco State U.	162	12,038	11,246	11,694	11,857	8,627	7,490	7,566	7,048
U. Delaware	163	4,551	5,344	5,050	11,850	3,234	4,094	3,996	5,591
Mississippi State U.	164	6,814	10,917	7,744	11,727	3,890	5,110	2,552	5,487
Rush U.	165	18,302	13,822	12,283	11,598	17,357	12,252	10,059	9,688
Rosalind Franklin U. of Medicine and Science	166	14,625	12,825	11,434	11,566	8,135	7,651	7,942	6,320
East Carolina U.	167	3,075	2,842	10,397	11,180	1,419	1,150	5,749	7,170
Rutgers, State U. New Jersey, Newark	168	10,800	12,676	9,197	10,822	5,847	7,681	7,225	7,627
U. North Texas, Denton	169	10,319	10,805	7,908	10,612	2,780	2,197	1,789	3,469
U. Maine	170	10,759	10,949	9,846	10,501	4,757	4,992	5,112	5,219
New Jersey Institute of Technology	171	3,051	2,459	4,038	10,240	1,384	1,109	966	1,055
U. Nebraska, central administration	172	6,872	9,514	9,291	9,970	6,872	9,514	9,259	9,938
U. Southern Mississippi	173	7,545	8,948	8,983	9,825	6,035	6,633	7,130	7,840
U. Texas, Arlington	174	7,903	8,478	8,816	9,659	2,074	2,515	2,923	3,410

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U. New Hampshire	175	12,981	11,697	10,279	9,521	8,470	7,420	4,781	4,717
Delaware State U.	176	6,582	8,501	8,804	9,339	4,555	5,974	6,867	8,574
Howard U.	177	5,089	5,312	6,350	9,045	2,174	1,798	2,527	2,446
Ohio U.	178	6,676	7,691	8,765	9,040	2,113	2,603	3,462	3,118
Rensselaer Polytechnic Institute	179	5,384	6,102	6,913	8,885	3,609	4,483	3,934	4,807
Portland State U.	180	2,702	7,666	9,159	8,790	2,389	7,166	8,523	8,269
U. Massachusetts, Lowell	181	5,331	5,523	5,652	8,776	2,953	3,156	2,921	4,877
U. Toledo	182	5,834	5,710	6,944	8,546	2,867	2,730	3,292	2,786
Baylor U.	183	2,938	4,523	7,708	8,488	867	1,930	3,462	3,866
Creighton U.	184	7,033	5,976	7,059	8,439	2,648	2,430	2,775	3,886
Utah State U.	185	5,064	4,657	7,716	8,134	2,335	1,868	2,911	3,632
U. Houston	186	12,863	12,625	14,588	8,119	8,037	7,235	8,294	4,376
Boise State U.	187	7,701	8,089	9,570	8,027	4,907	5,371	6,566	4,946
U. Arkansas, Fayetteville	188	6,498	6,357	6,294	7,885	2,770	2,880	3,154	4,428
U. Alabama, Tuscaloosa	189	3,536	3,602	5,585	7,565	1,911	2,119	2,864	3,941
Kent State U.	190	5,919	6,330	6,047	7,478	2,895	2,624	2,715	3,063
Wright State U.	191	8,443	7,780	6,556	7,364	5,665	4,918	4,572	5,195
Northeast Ohio Medical U.	192	8,481	8,678	8,853	7,274	6,336	7,209	7,210	5,404
Illinois Institute of Technology	193	8,645	8,046	6,978	7,268	8,004	7,375	6,735	6,956
SUNY, C. of Environmental Science and Forestry	194	10,119	9,281	6,857	7,202	2,591	3,064	2,389	1,969
East Tennessee State U.	195	7,316	5,949	8,912	7,172	5,555	4,219	6,103	4,149
New York Medical C.	196	7,813	7,391	7,406	7,095	4,652	4,316	4,088	4,095
Lehigh U.	197	4,448	4,073	4,088	7,035	3,846	3,834	3,767	5,913
Loma Linda U.	198	7,979	7,141	6,302	7,013	6,681	6,011	5,341	4,963
U. North Carolina, Greensboro	199	4,561	4,352	5,376	6,836	3,347	3,013	3,761	4,791
Marshall U.	200	4,753	3,800	4,893	6,734	2,263	1,964	2,694	4,127
U. Missouri, Kansas City	201	5,054	5,780	5,265	6,669	3,044	3,943	4,016	4,511
CUNY, Hunter C.	202	7,166	8,550	7,167	6,539	3,720	5,050	4,080	3,719
Indiana U.-Purdue U., Indianapolis	203	5,449	7,136	7,420	6,436	4,190	5,851	6,086	5,192
Texas Southern U.	204	2,695	4,513	4,073	6,427	1,851	3,247	2,518	4,253
Midwestern U.	205	6,387	6,539	6,633	6,375	548	448	775	715
Western U. of Health Sciences	206	2,921	4,010	4,966	6,309	2,102	3,585	4,511	5,747
Syracuse U.	207	7,738	7,080	7,028	6,304	3,545	3,734	3,858	3,138
Boston C.	208	12,312	8,248	7,705	6,239	10,395	6,057	6,232	4,556
North Carolina Central U.	209	7,314	6,873	6,036	6,212	7,084	6,362	5,698	6,112

TABLE 45

Total and federally financed higher education R&D expenditures in the biological and biomedical sciences, ranked by FY 2022 total: FYs 2019–22

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2019	2020	2021	2022	2019	2020	2021	2022
Marquette U.	210	7,863	5,871	5,143	6,042	5,003	3,443	2,967	3,777
SUNY, Binghamton U.	211	4,529	4,595	5,382	5,965	910	954	752	1,517
U. Texas, Dallas	212	3,900	6,377	5,280	5,932	2,314	3,035	2,713	2,814
Chapman U.	213	4,414	4,374	4,588	5,852	2,504	2,519	2,796	3,712
Miami U.	214	6,078	5,852	3,528	5,808	4,578	3,760	1,968	3,259
Southern Illinois U., Carbondale	215	4,686	4,876	6,268	5,789	2,197	2,290	1,824	2,251
Uniformed Services U. of the Health Sciences	216	1,512	1,525	7,192	5,696	916	902	5,079	3,651
Kennesaw State U.	217	1,431	4,759	2,202	5,572	653	618	609	715
Louisiana State U., Health Sciences Center, New Orleans	218	18,839	19,533	20,165	5,544	16,081	16,359	17,760	4,173
Clark Atlanta U.	219	6,360	6,017	6,614	5,400	3,859	3,468	3,496	2,923
U. Denver	220	4,137	4,591	5,277	5,332	2,284	2,441	3,273	3,941
CUNY, City C.	221	3,655	2,752	6,634	5,257	2,864	2,012	5,275	4,534
U. Alaska, Anchorage	222	4,874	4,665	6,250	5,216	3,907	3,606	5,164	4,540
Brigham Young U., Provo	223	5,135	5,643	5,012	5,141	2,742	3,131	3,353	3,282
U. California, Merced	224	8,620	7,563	5,096	5,113	3,282	3,335	2,895	2,722
Idaho State U.	225	2,198	2,459	2,965	5,056	1,272	1,666	1,847	3,441
U. Massachusetts, Boston	226	5,118	4,610	4,438	5,026	3,211	2,827	2,827	2,889
Western Michigan U. and Homer Stryker M.D. School of Medicine	227	4,532	5,859	5,315	5,019	1,962	2,015	1,855	1,766
U. North Carolina, Wilmington	228	5,604	4,791	4,712	4,997	2,656	2,330	1,804	1,431
North Dakota State U.	229	3,364	5,106	6,187	4,972	1,854	2,235	4,056	3,255
Memorial Sloan Kettering Cancer Center, Louis V. Gerstner Jr. Graduate S. of Biomedical Sciences	230	3,624	3,587	3,660	4,954	148	297	354	858
Tuskegee U.	231	2,230	2,274	2,263	4,912	1,719	1,753	1,850	4,469
Arkansas State U., Jonesboro	232	4,648	4,707	5,057	4,884	2,109	2,185	2,071	1,765
U. New England	233	3,909	3,742	3,916	4,749	2,818	2,927	2,715	2,969
U. Texas Rio Grande Valley	234	4,472	4,093	3,447	4,667	2,684	2,225	1,879	2,538
Old Dominion U.	235	9,952	9,611	8,798	4,660	1,929	1,867	1,749	1,782
Central Michigan U.	236	4,997	3,874	3,225	4,459	3,754	3,071	2,740	3,810
Texas Tech U., Health Sciences Center, El Paso	237	2,793	2,280	3,288	4,440	841	486	549	905
California State U., Northridge	238	3,232	3,875	3,633	4,439	2,346	2,980	2,938	3,026
Oakland U.	239	3,678	3,323	3,703	4,389	1,598	1,664	1,710	1,822
Texas A&M U.-Corpus Christi	240	5,218	6,377	4,643	3,998	4,676	4,191	2,629	2,452
Philadelphia C. of Osteopathic Medicine	241	794	945	3,294	3,992	346	422	318	40
U. Detroit Mercy	242	4,729	4,019	3,743	3,838	4,682	3,984	3,709	3,802
U. North Carolina, Charlotte	243	3,110	2,608	3,066	3,805	1,992	1,676	2,035	2,572
U. Wisconsin-Milwaukee	244	2,772	4,150	3,765	3,770	1,832	2,489	2,132	2,203

TABLE 45

Total and federally financed higher education R&D expenditures in the biological and biomedical sciences, ranked by FY 2022 total: FYs 2019–22

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2019	2020	2021	2022	2019	2020	2021	2022
Rowan U.	245	4,311	3,264	3,796	3,758	3,160	2,705	3,249	3,209
CUNY, Advanced Science Research Center	246	3,130	3,733	4,949	3,752	2,749	3,304	4,115	2,942
Desert Research Institute	247	2,993	3,539	3,574	3,674	188	43	33	0
U. Memphis	248	5,032	4,754	3,805	3,665	2,960	2,339	2,036	1,888
Des Moines U.	249	1,377	2,809	3,670	3,573	647	4	423	661
Worcester Polytechnic Institute	250	1,791	2,104	2,188	3,538	1,087	954	1,065	1,589
Illinois State U.	251	2,992	2,008	2,936	3,513	2,500	1,692	2,649	3,027
U. Puerto Rico, Rio Piedras	252	3,657	3,590	4,234	3,349	2,897	2,884	3,234	2,373
Wake Forest U.	253	3,042	3,538	3,260	3,339	1,856	2,459	2,321	2,632
U. North Texas, Health Science Center	254	20,989	13,197	14,592	3,299	8,378	6,661	8,634	772
San Jose State U.	255	1,130	1,542	2,431	3,253	1,002	1,268	1,047	1,924
South Dakota State U.	256	3,648	3,689	2,785	3,167	1,901	1,813	1,284	2,030
Morgan State U.	257	3,643	2,906	2,121	3,096	3,552	2,890	2,121	2,986
U. West Florida	258	1,337	1,690	2,018	2,741	218	409	679	702
CUNY, Queens C.	259	1,052	1,250	1,599	2,738	831	1,054	1,155	1,535
U. of the Virgin Islands	260	0	1,554	1,913	2,708	0	1,554	1,913	2,708
Southern Methodist U.	261	1,533	2,144	1,978	2,648	1,283	1,061	1,365	1,161
Colorado School of Mines	262	1,948	1,549	2,458	2,627	1,423	1,513	1,927	1,985
California State U., Fullerton	263	1,799	1,395	1,770	2,598	1,519	1,262	1,577	1,887
Smith C.	264	2,338	1,657	1,305	2,567	1,017	867	687	761
U. California, San Francisco	265	2,267	2,358	2,520	2,517	750	681	433	912
Georgia Southern U.	266	452	5	2,442	2,483	129	5	338	363
William & Mary	267	1,997	2,241	1,823	2,449	1,219	1,205	1,232	1,485
MGH Institute of Health Professions	268	1,537	1,427	1,300	2,428	1,537	1,427	1,300	2,428
Murray State U.	269	3,048	2,399	2,962	2,351	2,149	1,496	2,117	1,419
Williams C.	270	610	582	602	2,275	413	396	420	614
U. Central Oklahoma	271	303	303	316	2,255	231	229	240	465
James Madison U.	272	771	1,099	1,865	2,228	629	533	952	1,068
U. Massachusetts, Dartmouth	273	1,956	1,390	1,725	2,225	621	253	211	191
Chicago State U.	274	52	ne	ne	2,223	52	ne	ne	2,223
Hope C.	275	477	629	1,130	2,209	407	282	408	2,130
Middle Tennessee State U.	276	1,005	1,359	2,096	2,188	610	599	766	918
Sam Houston State U.	277	1,994	1,382	2,145	2,162	250	379	869	837
Long Island U.	278	25	621	734	2,155	16	58	30	61
Wichita State U.	279	2,793	2,959	2,705	2,150	2,435	2,623	2,395	1,992

TABLE 45

Total and federally financed higher education R&D expenditures in the biological and biomedical sciences, ranked by FY 2022 total: FYs 2019–22

(Dollars in thousands)

Institution	Rank	Total				Federally financed											
		2019	2020	2021	2022	2019	2020	2021	2022								
Tennessee State U.	280	1,133	2,425	2,958	i	2,132	934	2,266	2,958	i	2,132						
California State U., Monterey Bay	281	2,116	2,006	1,861		2,127	1,993	1,859	1,817		1,987						
Albany C. of Pharmacy and Health Sciences	282	3,033	2,732	3,562		2,001	1,476	1,111	1,856		958						
Loyola Marymount U.	282	488	407	637		2,001	272	233	243		665						
Michigan Technological U.	284	2,654	2,392	1,772		1,963	1,085	901	672		567						
Alabama State U.	285	1,860	1,747	2,265		1,929	1,860	1,747	2,265		1,929						
North Carolina A&T State U.	286	1,085	1,612	1,491		1,925	1,048	1,455	1,186		1,801						
Oregon Institute of Technology	286	845	i	765	i	1,637	i	1,925	i	0	i	0	66	i	89	i	
Appalachian State U.	288	1,339	840	1,089		1,906	387	345	371		762						
Pepperdine U.	289	329	597	398		1,884	303	121	282		213						
California State U., Long Beach	290	2,389	2,110	1,201		1,834	2,109	1,849	947		1,306						
Wesleyan U.	291	1,810	909	1,469		1,833	954	382	581		878						
Alabama A&M U.	292	2,231	i	1,521	i	1,649	i	1,800	i	1,618	i	1,104	i	1,407	i	1,746	i
Texas A&M U.-Kingsville	293	1,115	1,386	1,328		1,782	898	1,120	1,157		1,559						
U. Missouri, Saint Louis	293	1,667	1,567	1,869		1,782	1,214	1,025	1,238		1,354						
U. Nebraska, Omaha	295	1,165	2,254	1,034		1,778	1,020	2,192	952		1,492						
California State Polytechnic U., Pomona	296	1,602	1,818	1,555		1,753	992	1,365	1,216		1,250						
Villanova U.	297	1,780	2,133	2,053		1,743	338	333	562		690						
Amherst C.	298	1,419	1,064	1,259	i	1,741	606	608	527		1,269						
Tennessee Technological U.	299	972	1,167	1,325		1,709	702	870	1,010		1,300						
Indiana U. Pennsylvania	300	1,345	1,107	1,831		1,677	869	667	989		814						
Rochester Institute of Technology	301	903	1,238	1,551		1,657	594	668	763		765						
Ball State U.	302	1,569	1,412	1,536		1,644	666	689	727		1,036						
Duquesne U.	303	3,645	3,648	1,239		1,627	1,176	1,178	849		1,080						
Saint Joseph's U.	304	434	726	517		1,608	116	460	362		1,035						
Touro U., California	305	2,557	2,514	2,637		1,564	581	521	537		238						
SUNY, Polytechnic Institute	306	1,995	1,977	2,412		1,529	1,406	1,297	1,233		1,529						
Bates C.	307	792	1,166	1,660		1,521	719	1,095	1,511		1,292						
Bowling Green State U.	308	696	909	1,125		1,515	330	376	631		842						
U. Alabama, Huntsville	309	1,928	2,046	1,411		1,508	675	583	300		366						
U. Arkansas, Little Rock	310	2,380	2,833	1,957		1,502	1,619	2,143	1,955		1,471						
U. North Florida	311	741	907	1,243		1,451	307	310	720		786						
Langston U.	312	1,264	1,650	510		1,402	1,026	1,650	510		1,020						
Black Hills State U.	313	818	783	800		1,391	462	658	648		1,114						
U. Minnesota, Duluth	314	1,182	1,090	1,279		1,333	426	592	774		876						

TABLE 45

Total and federally financed higher education R&D expenditures in the biological and biomedical sciences, ranked by FY 2022 total: FYs 2019–22

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2019	2020	2021	2022	2019	2020	2021	2022
South Carolina State U.	315	1,133	1,175	i 1,217	i 1,321	1,133	1,175	i 1,217	i 1,321
Reed C.	316	1,588	1,573	i 1,629	i 1,319	1,031	1,180	i 1,252	i 718
U. Akron	317	1,915	1,699	1,180	1,303	793	694	397	655
Barnard C.	318	602	625	873	1,297	309	432	762	1,082
Swarthmore C.	319	755	841	824	1,295	468	439	428	820
Fisk U.	320	4,520	3,427	1,601	1,289	4,473	3,427	1,579	1,196
California State U., San Marcos	321	1,439	1,451	978	1,283	639	642	197	440
Keck Graduate Institute	322	1,474	i 1,412	i 1,350	i 1,282	i 769	i 727	i 685	i 643
Bowdoin C.	323	1,206	1,196	1,262	1,275	940	869	1,002	957
Louisiana Tech U.	324	750	753	749	1,249	180	232	194	210
Stevens Institute of Technology	325	0	0	94	1,245	0	0	83	833
Bucknell U.	326	608	743	i 674	1,238	245	361	i 354	777
Clarkson U.	327	765	902	920	1,235	417	442	565	667
Fordham U.	328	1,819	1,435	1,207	1,213	995	883	717	575
Tougaloo C.	329	274	503	501	i 1,207	i 274	503	501	i 1,207
California State U., San Bernardino	330	1,549	539	882	1,187	603	89	93	304
U. of the Pacific	331	803	641	687	1,160	674	326	434	767
California State U., Channel Islands	332	779	707	807	1,143	0	0	0	311
Bryn Mawr C.	333	781	640	709	1,132	212	100	194	448
C. New Jersey	334	ne	649	819	1,116	ne	328	347	631
Colorado State U., Pueblo	335	1,223	1,676	1,845	1,115	1,220	1,081	1,248	853
Oklahoma State U., Center for Health Sciences	336	425	452	531	1,090	3	0	70	634
U. Maryland Center for Environmental Science	337	2,402	1,978	1,035	1,088	1,702	1,261	682	781
U. Colorado Denver ^e	338	na	na	1,012	1,076	na	na	942	941
Framingham State U.	339	ne	0	0	i 1,070	i ne	0	0	i 73
Hampton U.	340	794	783	872	1,056	794	783	872	1,056
Clark U.	341	1,288	1,134	1,059	1,052	827	705	649	518
Wellesley C.	342	1,330	1,454	1,554	1,033	1,021	1,326	1,418	859
Nevada State C.	343	ne	ne	ne	1,016	ne	ne	ne	994
U. New Orleans	344	817	974	1,074	1,014	108	148	215	191
U. South Carolina, Aiken	345	0	962	657	1,008	0	870	554	721
California State U., Stanislaus	346	836	1,163	1,222	1,004	449	752	702	401
Texas Woman's U.	347	636	562	251	977	325	430	123	977
Kean U.	348	ne	63	0	976	ne	0	0	89
Northern Michigan U.	349	364	430	644	974	34	30	73	230

TABLE 45

Total and federally financed higher education R&D expenditures in the biological and biomedical sciences, ranked by FY 2022 total: FYs 2019–22

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2019	2020	2021	2022	2019	2020	2021	2022
Trinity C., Hartford	350	777	908	1,062	965	745	861	884	811
Florida Institute of Technology	351	1,384	667	875	949	965	423	538	541
U. Northern Colorado	352	999	896	963	925	377	389	457	465
Southeastern Louisiana U.	353	689	793	637	918	304	337	290	712
U. Nebraska, Kearney	354	842	775	995	910	469	405	545	645
C. Charleston	355	1,009	882	1,147	904	661	561	843	740
CUNY, Baruch C.	355	357	250	777	904	264	117	749	760
Vassar C.	357	34	197	172	897	13	16	87	544
Lake Superior State U.	358	ne	ne	ne	892	ne	ne	ne	892
DePaul U.	359	332	296	371	865	267	264	281	865
Franklin and Marshall C.	360	745	572	677	860	593	502	584	782
St. John's U., New York	361	837	998	1,045	856	745	819	898	769
California Polytechnic State U., San Luis Obispo	362	1,227	1,009	707	844	658	609	464	632
U. Texas of the Permian Basin	362	ne	328	962	844	ne	328	962	797
Northern Illinois U.	364	695	436	1,232	839	390	176	646	415
U. Richmond	365	937	765	766	835	708	648	604	574
U. Tennessee, Chattanooga	365	749	843	746	835	564	552	594	657
Willamette U.	367	278	169	472	832	143	35	367	411
U. Tulsa	368	785	500	607	828	357	267	330	360
Towson U.	369	626	531	450	824	414	361	305	490
William Paterson U.	370	442	512	571	821	32	81	201	461
Western Kentucky U.	371	1,530	1,307	924	815	893	706	354	310
U. Wisconsin-La Crosse	372	703	667	603	813	475	402	397	486
Eastern Michigan U.	373	1,065	1,350	1,037	791	504	763	467	317
CUNY, Graduate School of Public Health and Health Policy	374	413	688	492	784	413	688	492	784
California State U., Los Angeles	375	2,424	1,949	476	773	1,715	1,512	319	597
Davidson C.	376	507	322	595	769	272	200	259	325
SUNY, Buffalo State	377	645	929	780	767	188	176	29	29
Kenyon C.	378	569	534	ne	753	484	520	ne	689
Jackson State U.	379	1,021	1,045	691	750	831	804	591	668
Trinity U.	380	452	499	455	735	95	296	184	230
California State U., Fresno	381	614	449	448	709	596	362	440	548
Hofstra U.	381	412	337	590	709	360	308	358	483
U. Puget Sound	383	ne	357	ne	707	ne	223	ne	572
Roger Williams U.	384	246	177	521	695	178	166	367	482

TABLE 45

Total and federally financed higher education R&D expenditures in the biological and biomedical sciences, ranked by FY 2022 total: FYs 2019–22

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2019	2020	2021	2022	2019	2020	2021	2022
Middlebury C.	385	317	506	1,017	692	296	374	999	643
New Mexico Institute of Mining and Technology	386	395	260	290	691	387	255	244	593
Montclair State U.	387	1,152	1,422	1,125	688	810	948	861	643
Northland C.	387	ne	ne	602	688	ne	ne	437	487
Colgate U.	389	726	478	507	676	246	84	331	170
Tarleton State U.	390	9	249	415	675	0	15	0	0
West Virginia School of Osteopathic Medicine	391	ne	629	522	666	ne	52	59	119
American U.	392	1,225	1,235	719	661	505	476	282	252
Montana Technological U.	393	1,006	708	661	656	478	339	305	335
U. Texas, Tyler	394	470	541	774	653	261	259	540	596
Missouri U. of Science and Technology	395	921	970	553	652	143	130	97	172
Lafayette C.	396	82	87	93	649	80	50	55	573
U. San Francisco	397	88	65	81	640	19	0	19	102
Missouri State U.	398	442	651	850	634	185	475	517	422
CUNY, Brooklyn C.	399	1,727	1,792	1,505	630	1,308	1,363	1,341	547
Elizabeth City State U.	400	ne	435	751	628	ne	428	751	628
Christopher Newport U.	401	584	644	536	625	132	160	70	293
U. Wisconsin-Oshkosh	402	728	731	735	617	639	635	630	511
U. Maryland, Eastern Shore	403	0	269	120	616	0	269	120	616
U. Central Arkansas	404	412	398	462	612	205	242	303	405
Rhode Island C.	405	528	540	1,041	611	510	504	1,021	607
Dillard U.	406	1,270	1,099	470	609	414	500	70	288
Catholic U. of America	407	1,633	1,333	1,157	607	1,633	1,228	968	491
Pennsylvania State U., Harrisburg	407	36	82	248	607	20	76	18	311
California State Polytechnic U., Humboldt	409	1,059	1,302	1,028	606	174	552	151	227
Harvey Mudd C.	410	457	520	364	605	323	444	316	534
Southern U. and A&M C., Baton Rouge	410	210	128	261	605	183	128	261	605
Haverford C.	412	582	926	313	604	133	109	95	325
Southern Illinois U., Edwardsville	413	208	1,047	2,023	589	123	271	467	457
Butler U.	414	ne	ne	ne	583	ne	ne	ne	544
Gallaudet U.	415	818	853	525	577	0	0	0	63
U. Guam	416	208	291	411	573	196	205	323	475
Northern Kentucky U.	417	450	458	562	561	282	257	330	368
U. Hawaii, Hilo	418	1,754	1,548	996	560	1,437	1,145	657	293
CUNY, C. Staten Island	419	295	554	407	548	177	377	347	527

TABLE 45

Total and federally financed higher education R&D expenditures in the biological and biomedical sciences, ranked by FY 2022 total: FYs 2019–22

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2019	2020	2021	2022	2019	2020	2021	2022
Winston-Salem State U.	420	449	684	189	542	449	677	189	467
Lewis and Clark C.	421	584	651	288	541	526	538	258	345
Pennsylvania State U., Behrend	422	75	21	55	532	17	15	0	238
Colby C.	423	639	304	270	528	538	243	186	490
Hawaii Pacific U.	424	560	594	557	526	459	570	557	520
Grand Valley State U.	425	542	667	625	507	318	262	303	273
Sul Ross State U.	426	0	0	0	505	0	0	0	101
Fort Lewis C.	427	289	231	352	499	241	187	352	493
Connecticut C.	428	348	275	232	477	95	48	89	152
U. Wisconsin-Green Bay	428	315	306	335	477	151	164	172	206
Seton Hall U.	430	810	138	607	463	810	138	607	463
Western Washington U.	431	718	721	548	455	249	243	175	328
Pacific U.	432	259	160	121	454	15	25	76	77
California State U., Sacramento	433	682	682	735	452	17	125	126	132
Minnesota State U., Mankato	434	187	63	329	437	136	0	300	313
West Chester U. Pennsylvania	434	659	459	350	437	414	337	240	228
Mount Holyoke C.	436	142	359	398	425	87	333	376	418
U. Puerto Rico, Mayaguez	437	1,225	1,067	865	405	939	918	865	348
C. Wooster	438	483	242	339	400	84	76	70	102
National Defense U.	438	0	200	400	400	0	200	400	400
Xavier U. Louisiana	440	765	1,070	378	398	710	987	354	385
St. Edward's U.	441	1,010	825	825	390	1,000	800	800	270
Clafin U.	442	350	857	492	382	350	854	482	382
Calvin U.	443	503	329	355	381	449	273	273	274
Salisbury U.	443	396	366	381	381	4	32	88	82
Utah Valley U.	445	ne	ne	ne	380	ne	ne	ne	261
U. South Alabama	446	403	87	232	376	211	41	133	162
Furman U.	447	254	335	309	375	236	309	281	283
New York Institute of Technology	448	294	283	227	372	294	283	227	372
Coastal Carolina U.	449	305	98	173	368	268	98	75	109
Sonoma State U.	450	ne	197	170	349	ne	161	169	341
St. Cloud State U.	451	833	349	270	348	386	126	6	56
Spelman C.	452	478	604	484	347	478	604	484	347
Purdue U., Fort Wayne	453	665	483	252	343	122	117	44	20
California State U., East Bay	454	ne	439	478	340	ne	58	57	13

TABLE 45

Total and federally financed higher education R&D expenditures in the biological and biomedical sciences, ranked by FY 2022 total: FYs 2019–22

(Dollars in thousands)

Institution	Rank	Total				Federally financed					
		2019	2020	2021	2022	2019	2020	2021	2022		
CUNY, Lehman C.	455	0	255	181	335	0	136	78	283		
Indiana State U.	455	709	690	456	335	450	327	78	75		
Northeastern Illinois U.	455	328	249	351	335	328	249	351	335		
Western New England U.	458	ne	ne	ne	333	ne	ne	ne	0		
U. Colorado Colorado Springs	459	510	716	728	332	441	651	718	313		
Western Carolina U.	459	358	279	421	332	91	66	205	229		
Southern Connecticut State U.	461	98	357	132	323	0	17	16	126		
Bowie State U.	462	122	414	96	319	122	414	96	319		
Pomona C.	463	296	338	288	318	81	180	202	223		
Morehead State U.	464	682	211	728	315	601	211	721	90		
Winthrop U.	465	254	100	240	314	100	64	103	166		
Occidental C.	466	560	278	279	312	i	478	199	279	312	i
U. Alaska, Southeast	467	368	374	723	310	368	369	710	285		
Santa Clara U.	468	252	576	386	308	252	463	356	282		
Southern U. and A&M C., Agricultural Research and Extension Center	469	489	298	295	306	0	0	140	140		
U. of the Incarnate Word	470	197	327	268	303	56	14	81	194		
CUNY, New York City C. of Technology	471	631	496	362	298	487	394	311	293		
Hobart and William Smith Colleges	471	150	79	45	298	82	39	37	217		
Robert Morris U.	473	ne	ne	ne	292	i	ne	ne	ne	170	i
U. Louisiana, Monroe	474	326	410	298	291	305	409	298	291		
CUNY, York C.	475	359	485	129	288	340	450	71	221		
California State U., Dominguez Hills	476	213	110	0	286	162	81	0	254		
U. of St. Thomas (MN)	476	471	514	182	286	196	242	113	102		
Whitman C.	478	464	427	ne	284	338	302	ne	89		
U. Washington, Tacoma	479	24	1	203	276	0	0	203	276		
Rutgers, State U. New Jersey, Camden	480	25	225	13	275	0	0	0	0		
Claremont McKenna C.	481	337	396	274	272	337	396	274	272		
Grinnell C.	481	363	487	423	272	41	29	17	20		
Central Washington U.	483	517	428	336	266	206	179	122	42		
Morehouse C.	484	98	120	90	263	98	120	90	263		
Prairie View A&M U.	485	193	379	353	258	185	369	320	255		
Pittsburg State U.	486	243	178	110	254	236	178	109	254		
U. Washington, Bothell	486	314	0	493	254	252	0	323	254		
Youngstown State U.	486	69	74	14	254	0	0	0	231		
Mercer U.	489	239	235	250	253	0	0	0	0		

TABLE 45

Total and federally financed higher education R&D expenditures in the biological and biomedical sciences, ranked by FY 2022 total: FYs 2019–22

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2019	2020	2021	2022	2019	2020	2021	2022
U. North Carolina, general administration	490	263	0	522	250	0	0	0	0
Texas Christian U.	491	215	311	138	248	0	57	138	209
Carleton C.	492	532	256	501	246	108	82	115	87
Azusa Pacific U.	493	259	126	174	240	0	0	0	0
Pace U.	494	532	431	296	225	476	386	288	178
U. Dayton	494	168	217	163	225	145	205	163	211
U. Wisconsin-Platteville	496	109	i 111	i 191	i 224	i 41	i 41	i 53	i 65
U. Charleston	497	ne	ne	ne	217	ne	ne	ne	217
Saint John's U.	498	109	i 104	i 180	i 208	i 0	i 0	i 0	i 0
Sonoran U. Health Sciences	498	0	ne	ne	208	i 0	ne	ne	0
C. of Saint Benedict	500	122	i 116	i 178	i 205	i 0	i 0	i 14	i 16
Central State U.	501	46	59	164	203	46	59	164	203
Seattle U.	502	248	156	29	200	116	86	25	103
Citadel Military C. South Carolina	503	ne	75	103	196	ne	49	77	124
U.S. Air Force Academy	504	140	0	317	194	140	0	317	194
Ithaca C.	505	ne	138	128	190	ne	132	109	170
U. of Mary Washington	505	100	132	155	190	64	85	119	111
Abilene Christian U.	507	ne	ne	101	185	ne	ne	0	0
Fort Valley State U.	508	185	129	164	184	162	121	121	184
Albion C.	509	98	76	74	i 182	i 0	0	0	i 30
U. Southern Maine	510	143	195	180	180	16	60	63	55
Florida Gulf Coast U.	511	51	0	94	179	0	0	62	45
Texas A&M International U.	512	64	9	185	173	0	0	65	66
California Lutheran U.	513	206	257	ne	171	107	144	ne	23
Biola U.	514	146	i 150	i 157	i 170	i 0	i 0	i 0	0
U. San Diego	515	106	92	37	169	22	31	19	39
Eastern Connecticut State U.	516	300	376	205	157	169	177	107	35
SUNY, Geneseo	517	233	131	108	152	150	58	61	85
SUNY, Oswego	518	354	281	129	151	218	190	72	82
Johnson C. Smith U.	519	137	0	160	i 146	132	0	160	i 146
U. Ana G. Mendez, Gurabo	520	337	648	175	144	i 309	446	120	143
Union C., Schenectady	521	80	45	64	143	14	13	4	41
Macalester C.	522	343	297	108	142	108	121	10	61
Texas A&M U.-San Antonio	523	ne	ne	ne	137	ne	ne	ne	48
U. Houston-Downtown	524	37	46	25	135	0	0	0	93

TABLE 45

Total and federally financed higher education R&D expenditures in the biological and biomedical sciences, ranked by FY 2022 total: FYs 2019–22

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2019	2020	2021	2022	2019	2020	2021	2022
U. Houston-Clear Lake	525	52	44	42	134	9	20	38	83
Plymouth State U.	526	ne	ne	ne	133	ne	ne	ne	133
U.S. Military Academy	527	430	421	1,318	132	430	295	1,250	130
Lamar U.	528	122	55	23	131	0	27	0	28
Colorado C.	529	117	121	144	128	12	20	1	0
Central Connecticut State U.	530	112	131	142	121	31	73	97	23
U. Wisconsin-Stevens Point	531	202 i	214	205	119	2 i	2	2	6
Hamilton C.	532	180	81	122	116	51	26	86	75
Florida A&M U.	533	153	67	29	113	97	61	29	113
Skidmore C.	534	150	85	351	111	122	69	330	108
U. Wisconsin-Eau Claire	534	86	80	174	111	35	30	42	0
U. Northern Iowa	536	63	104	164	104	44	35	0	44
U. New Haven	537	74	35	121	101	24	9	25	31
U. Michigan, Dearborn	538	152	121	75	99	69	112	75	99
Monmouth U.	539	56	85	35	98	0	0	0	51
New Mexico Highlands U.	540	ne	171	164 i	93 i	ne	115	120 i	82 i
Norfolk State U.	540	108	114	88	93	108	114	88	93
Virginia Military Institute	542	ne	ne	ne	83	ne	ne	ne	0
Eastern Washington U.	543	66	186	193	79	0	155	188	63
California State U., Chico	544	310	184	111	63	282	170	111	63
Drake U.	545	31	ne	17	62	10	ne	8	58
Stockton U.	545	78	105	0	62	50	39	0	62
Virginia State U.	547	15	24	83	61	15	24	38	44
Stephen F. Austin State U.	548	75	57	80	60	0	0	0	0
Fayetteville State U.	549	328	408	30	56	328	408	30	56
U. North Carolina, Asheville	550	505	493	322	53	75	73	14	35
Elon U.	551	79	140	108	49	0	0	39	0
Purdue U., Northwest	552	52	18	29	47	39	5	28	47
California State U., Bakersfield	553	295	223	189	46	92	70	53	29
St. Catherine U.	554	ne	ne	ne	42	ne	ne	ne	0
Troy U.	555	ne	176	62	41	ne	157	37	2
SUNY, C. Brockport	556	263	299	67	39	193	291	61	20
CUNY, system office	557	30	84	37	38	3	84	37	38
Manhattan C.	558	82	56	49	37	0	0	0	0
Austin Peay State U.	559	705	60	50	35	35	49	50	29

TABLE 45

Total and federally financed higher education R&D expenditures in the biological and biomedical sciences, ranked by FY 2022 total: FYs 2019–22

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2019	2020	2021	2022	2019	2020	2021	2022
U. Puerto Rico, Cayey	560	404 i	601	392	30	0	237	145	30
Western Illinois U.	560	1,195	852	334	30	969	653	274	8
Embry-Riddle Aeronautical U.	562	0	0	0	26	0	0	0	26
U. North Georgia	562	52	16	31	26	2	16	31	26
Northwestern State U. Louisiana	564	50	131	7	19	0	0	0	0
Suffolk U.	564	ne	29	33	19	ne	29	33	14
Texas A&M U.-Commerce	566	265	144	31	18	0	8	0	0
Marymount U.	567	ne	ne	93	15	ne	ne	0	0
U. Hartford	568	0	0	0	10	0	0	0	3
CUNY, John Jay C. of Criminal Justice	569	132	49	43	9	113	39	43	0
U. Arkansas, Pine Bluff	570	174	74	0	8	136	58	0	6
La Sierra U.	571	132	101	5	7	32	4	0	0
Mercyhurst U.	571	12 i	10 i	8 i	7	0 i	0 i	0 i	0
CUNY, Graduate Center	573	51	116	110	6	46	87	92	0
Savannah State U.	573	183	22	3	6	183	22	3	6
New School	575	0	0	40	2	0	0	27	1
U. Illinois, Springfield	576	0	1	2	1	0	0	0	0
U. Puerto Rico, Humacao	576	284	229	86	1	284	229	86	1
All other surveyed institutions	-	28,434	20,424	5,773	0	16,309	9,776	4,093	0

i = imputed. na = not applicable; institution did not exist or did not exist as a separate entity. ne = not eligible; institution did not meet the criteria for inclusion.

^a Johns Hopkins University includes the Applied Physics Laboratory (APL), with \$30,143 thousand imputed for total and \$28,856 thousand reported for federally financed R&D expenditures in biological and biomedical sciences in FY 2022. Total expenditures by field for Johns Hopkins University are flagged as imputed because APL was unable to distribute a portion of institutionally funded R&D by field.

^b The University of Maryland includes expenditures from the University of Maryland, Baltimore and University of Maryland, College Park campuses. In FY 2019, the two campuses began reporting as one research unit to reflect their new strategic partnership. This relationship was codified through the University of Maryland Strategic Partnership Act passed by the Maryland General Assembly in 2016. Prior to FY 2019, both campuses reported to the survey as separate institutions.

^c The University of South Florida includes expenditures from the University of South Florida, Tampa; University of South Florida, Saint Petersburg; and University of South Florida, Sarasota-Manatee campuses. Due to the consolidation of the three campuses that occurred on 1 July 2020, University of South Florida, Saint Petersburg and University of South Florida, Sarasota-Manatee began reporting with the University of South Florida, Tampa as the University of South Florida. Prior to FY 2021, all three campuses reported to the survey as separate institutions.

^d The University of Tennessee, Knoxville includes expenditures from the University of Tennessee Institute of Agriculture. Due to a reorganization within the University of Tennessee system, the Institute of Agriculture now falls under the leadership of the University of Tennessee, Knoxville chancellor. Prior to FY 2020, the University of Tennessee, Knoxville, Institute of Agriculture reported to the survey separately.

^e The University of Colorado Denver and University of Colorado Anschutz Medical Center report to the survey separately. Prior to FY 2021, expenditures were reported together under University of Colorado Denver and Anschutz Medical Campus.

Note(s):

Institutions reporting zero expenditures in ranked total for FY 2022 are not listed in this table. Tied institutions are ranked alphabetically. Ranked institutions are geographically separate campuses headed by a campus-level president or chancellor. Some campuses are part of large, multi-campus universities; some are part of state university systems. For a complete list of campuses that belong to a larger university or system and their aggregate R&D expenditures, see table 6.

Source(s):

National Center for Science and Engineering Statistics, Higher Education Research and Development Survey.