

TABLE 45

**Total and federally financed higher education R&D expenditures in the biological and biomedical sciences, ranked by FY 2023 total: FYs 2020–23**

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2020	2021	2022	2023	2020	2021	2022	2023
All institutions	-	15,766,687	16,568,079	18,130,240	19,526,385	9,337,535	10,006,560	10,934,362	11,753,581
U. Pennsylvania	1	780,497	835,864	936,939	1,053,560	390,309	434,661	475,926	538,801
Harvard U.	2	534,656	539,289	561,958	647,908	325,366	308,919	309,766	346,008
Scripps Research Institute	3	444,964	485,435	492,639	494,946	243,502	272,181	242,135	278,099
Icahn School of Medicine at Mount Sinai	4	359,900	391,642	411,941	458,822	208,188	235,660	261,518	281,656
Washington U., Saint Louis	5	359,856	389,457	389,199	424,528	216,565	237,968	260,132	285,482
Baylor C. of Medicine	6	311,546	345,012	400,058	399,742	166,676	196,635	222,712	230,234
U. Southern California	7	132,168	117,462	398,478	382,074	91,893	82,518	172,487	200,990
Johns Hopkins U. <sup>a</sup>	8	311,295 i	350,122 i	358,980 i	379,802 i	221,384	269,831	273,011	279,015
U. Pittsburgh, Pittsburgh	9	294,183	304,345	353,030	364,789	189,410	206,387	243,501	255,129
U. Washington, Seattle	10	260,831	286,353	322,882	358,634	153,375	168,960	180,761	192,842
Rockefeller U.	11	322,734	325,035	328,999	354,022	78,153	87,220	87,168	93,816
U. Texas M. D. Anderson Cancer Center	12	304,198	320,834	326,187	353,135	64,702	73,202	73,169	78,004
U. Wisconsin-Madison	13	277,654	273,356	318,077	347,583	162,347	159,456	199,721	206,133
Cornell U.	14	311,954	317,690	356,105	347,213	153,222	164,967	174,559	184,382
New York U.	15	250,446	297,690	321,462	338,972	147,771	177,500	202,644	218,335
Duke U.	16	245,327	291,851	289,829	317,434	195,787	236,697	242,664	272,094
U. Michigan, Ann Arbor	17	266,507	262,263	266,722	298,094	180,703	185,914	198,644	203,273
Stanford U.	18	228,842	242,245	265,253	280,092	179,023	185,954	196,494	207,841
Columbia U. in the City of New York	19	206,509	226,903	249,393	272,728	168,917	186,401	198,164	217,140
Emory U.	20	182,193	203,597	228,756	252,403	144,201	161,290	186,219	200,429
Rutgers, State U. New Jersey, New Brunswick	21	113,712	90,875	214,943	246,404	57,418	54,432	134,409	150,612
Yale U.	22	206,929	222,114	226,285	245,250	140,048	150,159	158,700	167,992
U. Arizona	23	212,741	221,774	218,490	241,895	101,105	115,658	110,999	128,309
U. North Carolina, Chapel Hill	24	167,907	191,773	222,099	231,074	123,492	143,283	156,412	172,657
U. Florida	25	125,655	134,050	148,797	230,400	61,336	66,696	73,499	105,491
U. California, Davis	26	218,316	199,310	211,134	228,212	136,739	120,744	136,955	145,722
U. Texas Southwestern Medical Center	27	214,795	219,742	223,987	221,855	88,551	100,990	112,127	112,594
Vanderbilt U. and Vanderbilt U. Medical Center	28	183,620	206,202	194,205	221,265	109,381	121,941	127,970	142,026
U. Kentucky	29	175,026	181,729	204,821	216,881	93,567	101,455	111,422	116,212
Boston U.	30	163,939	168,310	189,654	211,743	110,627	112,638	124,668	132,253
Northwestern U.	31	153,629	166,594	189,086	205,479	99,378	115,175	129,866	139,214
U. Maryland <sup>b</sup>	32	166,254	183,621	193,170	202,787	114,209	116,912	122,265	122,259
U. Alabama, Birmingham	33	132,963	132,380	167,234	198,509	98,997	100,726	101,964	112,166
U. Texas Medical Branch	34	137,316	139,580	154,731	177,578	86,048	85,905	92,808	117,577

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Institution	Rank	Total				Federally financed			
		2020	2021	2022	2023	2020	2021	2022	2023
U. Georgia	35	143,796	156,208	167,001	169,728	78,657	90,936	102,961	99,203
U. Massachusetts, Medical School	36	137,103	145,417	153,954	157,353	96,954	100,459	106,862	107,760
U. California, Irvine	37	114,449	125,642	130,710	152,147	64,157	75,077	86,211	103,161
U. Virginia, Charlottesville	38	230,231	229,238	249,817	151,637	128,995	130,255	143,465	88,123
U. Iowa	39	126,870	134,116	132,705	148,336	78,419	80,979	85,296	91,907
Indiana U., Bloomington	40	124,207	122,903	137,850	148,161	80,025	82,191	86,181	96,490
U. Nebraska, Lincoln and Medical Center <sup>c</sup>	41	na	na	na	145,976	na	na	na	96,565
U. California, Berkeley	42	130,392	129,502	138,783	140,918	67,501	65,808	76,387	77,537
U. Minnesota, Twin Cities	43	111,883	118,493	126,554	138,086	63,674	75,180	81,077	88,199
Ohio State U.	44	83,715	92,910	128,503	132,029	58,581	65,420	83,337	85,462
North Carolina State U.	45	120,671	119,614	123,482	131,103	42,625	47,017	48,244	50,486
Michigan State U.	46	117,715	117,739	117,176	126,462	61,131	62,624	65,574	69,665
Cold Spring Harbor Laboratory	47	113,394	112,613	115,922	114,545	60,487	54,682	57,058	51,189
Princeton U.	48	81,137	87,346	102,181	112,622	50,581	52,315	52,108	50,130
Texas A&M U., College Station and Health Science Center	49	77,408	97,519	99,831	111,681	50,356	55,631	62,196	70,479
U. South Florida <sup>d</sup>	50	90,898	93,020	103,543	111,401	64,867	64,801	73,304	77,152
Pennsylvania State U., University Park and Hershey Medical Center	51	98,382	112,135	105,362	110,439	56,971	63,659	71,191	80,726
Arizona State U.	52	63,293	73,598	95,701	108,327	35,741	40,918	50,639	56,270
U. Illinois, Urbana-Champaign	53	77,458	91,434	93,256	107,346	44,234	54,744	57,463	68,102
Case Western Reserve U.	54	82,470	86,328	91,552	105,990	69,339	71,246	75,637	83,222
SUNY, U. Buffalo	55	88,070	95,200	95,707	105,597	47,604	51,230	57,523	64,626
Medical C. Wisconsin	56	83,882	83,895	94,917	104,865	47,297	49,607	53,829	58,524
Tufts U.	57	92,119	91,403	102,498	104,627	69,674	71,168	76,869	73,998
California Institute of Technology	58	89,580	100,578	98,392	102,066	65,017	67,730	71,660	64,984
Thomas Jefferson U.	59	74,942	83,083	94,743	101,200	42,244	49,473	55,606	56,560
Touro U., New York <sup>e</sup>	60	ne	ne	ne	99,676	ne	ne	ne	39,862
U. Texas Health Science Center, San Antonio	61	67,851	74,729	80,739	95,103	49,214	48,445	53,942	62,364
U. Connecticut	62	75,806	79,715	105,565	93,727	49,480	52,731	79,695	66,369
U. Miami	63	78,338	75,792	89,556	93,560	64,201	62,744	75,332	77,988
Dartmouth C. and Dartmouth Hitchcock Medical Center	64	84,528	83,974	89,693	93,530	49,057	53,355	53,746	56,400
U. Chicago	65	83,295	82,092	91,684	91,330	67,334	66,653	77,479	76,637
U. Illinois, Chicago	66	81,071	77,533	77,134	89,704	42,919	41,820	42,064	50,162
U. Texas, Austin	67	62,802	72,413	71,830	83,405	38,317	44,438	45,637	47,192
Virginia Commonwealth U.	68	53,656	72,971	72,528	81,364	40,720	47,612	47,604	45,485
Van Andel Research Institute	69	58,982	65,789	78,626	80,748	18,538	22,231	29,424	30,934

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Institution	Rank	Total				Federally financed			
		2020	2021	2022	2023	2020	2021	2022	2023
George Washington U.	70	52,902	58,491	69,589	75,627	33,137	39,381	47,496	63,920
Louisiana State U., Baton Rouge	71	56,483	60,515	71,438	75,146	26,797	29,672	33,532	37,324
Colorado State U., Fort Collins	72	39,769	67,310	74,575	74,873	23,865	37,530	41,838	51,583
U. Louisiana, Lafayette	73	68,528	60,760	67,016	73,783	11,539	16,125	16,403	18,058
Medical U. South Carolina	74	62,475	64,300	66,799	73,477	49,032	51,796	53,320	55,135
U. Rochester	75	54,066	56,944	61,720	71,596	44,908	48,117	50,613	59,741
Georgia State U.	76	50,131	52,370	59,500	71,207	24,615	26,909	29,839	38,417
Brown U.	77	57,280	57,160	60,922	70,926	41,143	43,126	44,492	51,567
U. California, San Diego	78	62,532	63,846	59,696	68,124	36,347	45,133	46,028	49,008
U. Hawaii, Manoa	79	53,100	52,760	60,677	66,938	16,953	19,052	30,300	33,467
U. Cincinnati	80	62,270	60,204	63,666	66,301	35,074	34,328	36,168	37,987
U. Texas Health Science Center, Houston	81	54,213	54,224	59,833	66,009	35,502	36,466	40,894	45,197
U. California, Riverside	82	60,674	60,318	60,605	63,568	25,037	24,845	29,798	30,925
SUNY, Stony Brook U.	83	61,121	64,217	60,840	63,418	39,569	40,518	40,425	40,388
U. Louisville	84	60,608	66,095	71,947	62,107	39,447	44,936	51,331	43,985
U. Arkansas for Medical Sciences	85	67,447	64,136	58,106	62,081	38,357	34,745	39,773	37,966
U. Vermont	86	54,565	51,579	61,287	59,063	37,701	35,980	41,145	39,614
Tulane U.	87	39,053	36,099	45,028	53,913	26,219	25,730	31,753	39,398
U. Colorado Boulder	88	41,081	42,368	46,086	53,109	34,958	36,680	38,408	45,839
U. Missouri, Columbia	89	50,323	51,630	56,404	51,453	39,472	35,810	40,162	29,006
Cleveland State U.	90	43,464	41,447	48,744	51,303	40,320	37,018	41,712	42,985
Florida International U.	91	39,760	37,940	46,249	50,113	19,181	17,524	22,144	28,259
Massachusetts Institute of Technology	92	67,446	60,795	56,438	49,814	42,112	37,649	33,137	29,243
Iowa State U.	93	39,072	42,898	42,147	46,701	18,255	17,834	18,729	21,655
U. Kansas	94	62,277	46,912	46,127	46,438	38,670	30,741	31,227	30,775
Virginia Polytechnic Institute and State U.	95	40,276	46,515	49,745	45,172	15,769	18,558	20,642	25,110
Washington State U.	96	35,845	34,771	32,110	43,833	21,674	23,178	21,086	26,810
Drexel U.	97	38,200	39,937	40,343	43,441	24,521	26,987	26,035	29,508
Oregon State U.	98	38,938	44,339	43,217	43,176	27,860	32,710	30,314	29,013
U. Oklahoma, Norman and Health Science Center	99	43,605	48,670	50,190	42,895	28,155	32,725	29,099	25,405
Augusta U.	100	40,513	41,967	45,192	41,090	29,605	29,845	31,479	28,154
U. Tennessee, Health Science Center	101	22,245	29,655	35,849	40,611	19,859	23,001	26,143	30,367
U. Oregon	102	33,631	37,907	44,968	40,483	28,932	28,980	36,500	31,687
West Virginia U.	103	25,158	30,824	31,046	40,246	12,150	16,135	15,616	21,154
U. California, Los Angeles	104	34,022	33,765	37,544	39,697	22,266	21,562	23,114	24,945

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		2020	2021	2022	2023	2020	2021	2022	2023
U. Tennessee, Knoxville	105	22,643	26,252	33,638	36,768	10,968	13,709	20,233	21,396
U. Nevada, Reno	106	36,791	43,521	39,371	35,893	18,123	25,242	23,391	20,508
SUNY, Downstate Health Sciences U.	107	32,389	33,935	30,468	35,600	26,171	27,284	25,081	28,543
U. Notre Dame	108	27,095	29,214	35,115	34,922	11,155	12,920	15,704	13,981
Temple U.	109	43,913	44,630	36,172	34,273	34,298	29,114	20,679	27,243
SUNY, U. Albany	110	27,543	29,137	31,346	33,695	17,227	18,406	21,007	23,294
U. New Mexico	111	28,740	27,380	27,705	32,536	23,802	22,646	22,603	27,081
Clemson U.	112	28,361	24,231	26,009	31,352	8,494	7,601	9,073	12,549
U. California, Santa Cruz	113	24,318	25,050	26,829	30,973	16,755	17,420	18,557	20,345
U. Texas Health Science Center, Tyler	114	21,265	27,928	33,872	30,867	7,732	12,007	14,362	11,345
Purdue U., West Lafayette	115	34,790	25,488	27,675	30,264	13,534	13,625	13,382	14,838
Northern Arizona U.	116	23,741	25,623	30,320	29,577	15,010	17,143	19,381	21,416
Oklahoma State U., Stillwater	117	19,956	25,945	26,166	29,350	7,699	10,218	10,421	12,115
Brandeis U.	118	26,272	28,082	25,632	29,283	20,298	20,128	19,143	20,906
Oregon Health and Science U.	119	26,551	21,651	24,166	28,310	20,651	17,330	19,214	22,693
Wayne State U.	120	24,007	26,291	28,121	28,196	14,506	16,595	19,785	19,925
U. Utah	121	40,013	44,662	27,988	28,019	24,860	28,068	26,785	24,267
U. Massachusetts, Amherst	122	25,906	25,498	27,376	26,929	15,754	16,284	17,268	17,311
Georgia Institute of Technology	123	18,410	21,357	25,448	26,908	9,186	11,572	14,130	14,713
U. Texas, San Antonio	124	23,733	23,479	22,618	26,481	9,925	10,784	12,418	15,575
U. Mississippi	125	15,866	22,359	26,692	26,272	11,028	19,215	21,528	15,898
U. Montana, Missoula	126	22,464	21,407	23,548	25,568	15,437	14,945	17,390	18,046
U. Idaho	127	22,764	25,070	24,647	25,376	17,044	19,286	18,297	17,049
Auburn U., Auburn	128	15,224	14,099	17,753	24,327	5,918	5,996	8,836	14,191
Florida State U.	129	22,836	21,063	22,715	24,154	12,479	10,937	11,397	12,449
U. Texas, El Paso	130	16,280	16,281	21,382	24,121	8,015	10,380	12,241	14,150
U. Alaska, Fairbanks	131	12,603	24,022	16,875	23,753	10,426	19,159	13,094	19,350
Kansas State U.	132	30,940	26,459	25,276	23,719	14,289	10,615	10,804	9,866
U. South Carolina, Columbia	133	21,174	14,237	19,230	23,497	10,663	9,864	11,314	13,896
George Mason U.	134	25,142	37,805	20,571	23,000	5,178	5,399	6,316	8,634
U. Rhode Island	135	18,161	17,614	15,848	22,967	15,256	15,150	14,387	18,301
U. Central Florida	136	15,378	15,562	18,380	22,276	10,063	10,666	10,111	11,421
Texas Tech U., Health Sciences Center	137	21,528	20,394	21,246	21,535	9,477	8,118	7,988	7,898
Meharry Medical C.	138	13,870	15,840	17,895	21,494	12,573	13,784	14,983	17,890
Florida Atlantic U.	139	16,997	18,879	18,712	21,354	6,357	6,611	6,104	5,954

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		2020	2021	2022	2023	2020	2021	2022	2023
U. Wyoming	140	14,659	15,284	22,214	21,047	13,246	14,012	19,594	18,293
Northeastern U.	141	14,718	13,919	17,086	20,438	12,023	11,399	13,886	15,214
SUNY, Upstate Medical U.	142	14,671	16,959	17,483	20,237	10,783	12,320	12,585	13,327
Loyola U., Chicago	143	15,804	16,741	16,600	20,227	11,042	12,636	12,644	13,472
Saint Louis U.	144	27,623	28,234	25,694	20,068	13,489	13,620	13,688	15,264
Rice U.	145	16,008	15,766	18,013	19,765	8,540	7,628	9,357	10,954
San Diego State U.	146	14,602	15,520	15,005	18,866	6,374	5,985	5,201	7,598
U. North Dakota	147	17,478	17,556	18,631	18,742	8,147	9,103	10,098	10,838
Albany Medical C.	148	17,150	16,121	15,847	17,693	12,263	12,700	12,816	13,516
U. Delaware	149	5,344	5,050	11,850	17,302	4,094	3,996	5,591	8,578
Texas Tech U.	150	12,709	14,152	18,732	16,883	1,723	1,621	3,833	5,099
Rush U.	151	13,822	12,283	11,598	16,566	12,252	10,059	9,688	12,751
U. Nevada, Las Vegas	152	12,763	12,969	14,714	16,544	8,177	7,772	7,450	10,284
Louisiana State U., Health Sciences Center, Shreveport	153	10,644	10,898	14,437	16,255	9,794	10,192	13,388	14,125
New Mexico State U.	154	9,867	15,045	18,584	16,067	8,253	13,212	16,255	13,729
Brigham Young U., Provo	155	5,643	5,012	5,141	15,754	3,131	3,353	3,282	4,919
Montana State U., Bozeman	156	19,994	18,017	16,954	15,576	14,059	12,653	12,075	10,671
U. Texas, Dallas	157	6,377	5,280	5,932	15,328	3,035	2,713	2,814	9,395
Carnegie Mellon U.	158	12,566	12,858	13,497	15,116	8,344	8,160	7,785	8,816
U. South Dakota	159	15,109	13,982	12,452	14,545	9,131	7,905	9,224	8,692
U. Houston	160	12,625	14,588	8,119	14,160	7,235	8,294	4,376	8,773
Georgetown U.	161	14,827	12,828	12,526	13,318	9,790	8,536	8,490	8,583
U. California, Santa Barbara	162	24,077	22,132	16,733	13,211	12,288	11,506	10,601	12,411
U. Maryland, Baltimore County	163	9,422	8,953	12,314	12,972	7,913	7,243	8,463	8,703
San Francisco State U.	164	11,246	i 11,694	11,857	12,529	7,490	i 7,566	7,048	8,776
U. Maine	165	10,949	9,846	10,501	12,393	4,992	5,112	5,219	6,085
Mississippi State U.	166	10,917	7,744	11,727	11,824	5,110	2,552	5,487	5,345
U. North Texas, Denton	167	10,805	7,908	10,612	11,793	2,197	1,789	3,469	3,379
Texas State U.	168	7,213	10,644	11,937	11,577	1,103	3,400	4,378	3,866
Delaware State U.	169	8,501	i 8,804	9,339	11,167	5,974	i 6,867	8,574	8,659
Rutgers, State U. New Jersey, Newark	170	12,676	9,197	10,822	11,051	7,681	7,225	7,627	7,908
U. Texas, Arlington	171	8,478	8,816	9,659	10,440	2,515	2,923	3,410	4,247
Texas Southern U.	172	4,513	4,073	6,427	10,156	3,247	2,518	4,253	6,467
U. Alabama, Tuscaloosa	173	3,602	5,585	7,565	10,055	2,119	2,864	3,941	4,436
East Carolina U.	174	2,842	10,397	11,180	9,967	1,150	5,749	7,170	5,592

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U. New Hampshire	175	11,697	10,279	9,521	9,896	7,420	4,781	4,717	5,923
U. Missouri, Kansas City	176	5,780	5,265	6,669	9,801	3,943	4,016	4,511	4,257
Ohio U.	177	7,691	8,765	9,040	9,779	2,603	3,462	3,118	3,067
Rosalind Franklin U. of Medicine and Science	178	12,825	11,434	11,566	9,687	7,651	7,942	6,320	5,917
Utah State U.	179	4,657	7,716	8,134	9,477	1,868	2,911	3,632	2,804
Eastern Virginia Medical School	180	9,968	9,234	12,924	9,447	6,821	6,620	8,868	7,181
Illinois Institute of Technology	181	8,046	6,978	7,268	9,135	7,375	6,735	6,956	7,983
Loma Linda U.	182	7,141 i	6,302	7,013	9,069	6,011 i	5,341	4,963	5,924
Boston C.	183	8,248	7,705	6,239	8,994	6,057	6,232	4,556	6,161
Wright State U.	184	7,780	6,556	7,364	8,985	4,918	4,572	5,195	6,789
Indiana U.-Purdue U., Indianapolis	185	7,136	7,420	6,436	8,927	5,851	6,086	5,192	6,868
Marshall U.	186	3,800	4,893	6,734	8,804	1,964	2,694	4,127	5,533
Creighton U.	187	5,976 i	7,059 i	8,439 i	8,703 i	2,430 i	2,775 i	3,886 i	4,099 i
U. Arkansas, Fayetteville	188	6,357	6,294	7,885	8,563	2,880	3,154	4,428	5,277
Portland State U.	189	7,666	9,159	8,790	8,533	7,166	8,523	8,269	7,247
U. North Carolina, Greensboro	190	4,352	5,376	6,836	8,384	3,013	3,761	4,791	5,936
Marquette U.	191	5,871	5,143	6,042	8,334	3,443	2,967	3,777	5,947
Northeast Ohio Medical U.	192	8,678	8,853	7,274	8,273	7,209	7,210	5,404	6,133
U. North Carolina, Charlotte	193	2,608	3,066	3,805	8,217	1,676	2,035	2,572	3,734
U. Southern Mississippi	194	8,948	8,983	9,825	8,112	6,633	7,130	7,840	6,633
Boise State U.	195	8,089	9,570	8,027	8,101	5,371	6,566	4,946	4,961
Rensselaer Polytechnic Institute	196	6,102	6,913	8,885	8,077	4,483	3,934	4,807	4,524
Syracuse U.	197	7,080	7,028	6,304	7,849	3,734	3,858	3,138	3,291
U. North Texas, Health Science Center	198	13,197	14,592	7,105 i	7,742	6,661	8,634	1,991 i	2,808
U. Colorado Anschutz Medical Campus <sup>f</sup>	199	na	8,948	14,636	7,738	na	4,008	3,917	3,402
U. Toledo	200	5,710	6,944	8,546	7,625	2,730	3,292	2,786	2,574
Kent State U.	201	6,330	6,047	7,478	7,579	2,624	2,715	3,063	2,997
U. Massachusetts, Lowell	202	5,523	5,652	8,776	7,299	3,156	2,921	4,877	4,440
Baylor U.	203	4,523	7,708	8,488	7,235	1,930	3,462	3,866	2,980
New York Medical C.	204	7,391	7,406	7,095	7,196	4,316	4,088	4,095	3,644
U. Denver	205	4,591	5,277	5,332	7,068	2,441	3,273	3,941	6,265
Midwestern U.	206	6,539	6,633	6,375	7,040	448	775	715	1,173
Rowan U.	207	3,264	3,796	3,758	6,937	2,705	3,249	3,209	3,734
North Carolina Central U.	208	6,873	6,036	6,212	6,885 i	6,362	5,698	6,112	6,771 i
Chapman U.	209	4,374	4,588	5,852	6,646	2,519	2,796	3,712	3,084

TABLE 45

**Total and federally financed higher education R&D expenditures in the biological and biomedical sciences, ranked by FY 2023 total: FYs 2020–23**

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2020	2021	2022	2023	2020	2021	2022	2023
Kennesaw State U.	210	4,759	2,202	5,572	6,567	618	609	715	1,665
Lehigh U.	211	4,073	4,088	7,035	6,525	3,834	3,767	5,913	5,400
Western Michigan U. and Homer Stryker M.D. School of Medicine	212	5,859	5,315	5,019	6,290	2,015	1,855	1,766	1,922
CUNY, Hunter C.	213	8,550	7,167	6,539	6,227	5,050	4,080	3,719	4,291
U. Massachusetts, Boston	214	4,610	4,438	5,026	6,104	2,827	2,827	2,889	4,004
Clark Atlanta U.	215	6,017	6,614	5,400	5,873	3,468	3,496	2,923	3,531
North Dakota State U.	216	5,106	6,187	4,972	5,733	2,235	4,056	3,255	3,863
Oakland U.	217	3,323	3,703	4,389	5,693	1,664	1,710	1,822	2,626
U. California, Merced	218	7,563	5,096	5,113	5,554	3,335	2,895	2,722	3,809
Arkansas State U., Jonesboro	219	4,707	5,057	4,884	5,379	2,185	2,071	1,765	1,860
CUNY, City C.	220	2,752	6,634	5,257	5,377	2,012	5,275	4,534	5,029
SUNY, Binghamton U.	221	4,595	5,382	5,965	5,338	954	752	1,517	1,348
Memorial Sloan Kettering Cancer Center, Louis V. Gerstner Jr. Graduate S. of Biomedical Sciences	222	3,587	3,660	4,954	5,324	297	354	858	273
California State U., Northridge	223	3,875	3,633	4,439	5,295	2,980	2,938	3,026	3,981
U. Texas Rio Grande Valley	224	4,093	3,447	4,667	5,279	2,225	1,879	2,538	3,153
Howard U.	225	5,312	6,350	9,045	5,231	1,798	2,527	2,446	793
Southern Illinois U., Carbondale	225	4,876	6,268	5,789	5,231	2,290	1,824	2,251	2,071
Wake Forest U.	227	3,538	3,260	3,339	5,132	2,459	2,321	2,632	3,597
Miami U.	228	5,852	3,528	5,808	5,120	3,760	1,968	3,259	2,535
U. North Carolina, Wilmington	229	4,791	4,712	4,997	5,072	2,330	1,804	1,431	2,051
CUNY, Advanced Science Research Center	230	3,733	4,949	3,752	5,063	3,304	4,115	2,942	3,487
U. New England	231	3,742	3,916	4,749	5,008	2,927	2,715	2,969	3,980
Idaho State U.	232	2,459	2,965	5,056	4,971	1,666	1,847	3,441	3,370
Uniformed Services U. of the Health Sciences	233	1,525	7,192	5,696	4,784	902	5,079	3,651	3,420
Old Dominion U.	234	9,611	8,798	4,660	4,710	1,867	1,749	1,782	2,635
Philadelphia C. of Osteopathic Medicine	235	945	3,294	3,992	4,611	422	318	40	442
Tuskegee U.	236	2,274	2,263	4,912	4,517	1,753	1,850	4,469	4,188
Illinois State U.	237	2,008	2,936	3,513	4,449	1,692	2,649	3,027	4,154
Central Michigan U.	238	3,874	3,225	4,459	4,202	3,071	2,740	3,810	3,323
U. Memphis	239	4,754	3,805	3,665	4,174	2,339	2,036	1,888	1,629
U.S. Air Force Academy	240	0	317	194	4,130	0	317	194	4,130
Western U. of Health Sciences	241	4,010	4,966	6,309	4,119	3,585	4,511	5,747	3,592
East Tennessee State U.	242	5,949	8,912	7,172	4,011	4,219	6,103	4,149	3,794
Texas Tech U., Health Sciences Center, El Paso	243	2,280	3,288	4,440	3,964	486	549	905	960
U. Wisconsin-Milwaukee	244	4,150	3,765	3,770	3,938	2,489	2,132	2,203	2,173

TABLE 45

**Total and federally financed higher education R&D expenditures in the biological and biomedical sciences, ranked by FY 2023 total: FYs 2020–23**

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2020	2021	2022	2023	2020	2021	2022	2023
U. Alaska, Anchorage	245	4,665	6,250	5,216	3,910	3,606	5,164	4,540	3,312
MGH Institute of Health Professions	246	1,427	1,300	2,428	3,900	1,427	1,300	2,428	3,900
Keck Graduate Institute	247	1,412 i	1,350 i	1,282	3,868	727 i	685 i	643	2,162
Morgan State U.	248	2,906	2,121	3,096	3,835	2,890	2,121	2,986	2,891
U. California, San Francisco	249	2,358	2,520	2,517	3,559	681	433	912	1,682
U. Detroit Mercy	250	4,019	3,743	3,838	3,484	3,984	3,709	3,802	3,454
U. Puerto Rico, Rio Piedras	251	3,590	4,234	3,349	3,448	2,884	3,234	2,373	2,477
Texas A&M U.-Corpus Christi	252	6,377	4,643	3,998	3,397	4,191	2,629	2,452	2,527
New Jersey Institute of Technology	253	2,459	4,038	10,240	3,301	1,109	966	1,055	1,374
Worcester Polytechnic Institute	254	2,104	2,188	3,538	3,170	954	1,065	1,589	1,519
Georgia Southern U.	255	5	2,442	2,483	3,125	5	338	363	589
Des Moines U.	256	2,809	3,670 i	3,573	3,041	4	423 i	661	158
Southern Methodist U.	257	2,144	1,978	2,648	3,002	1,061	1,365	1,161	1,378
California State U., Fullerton	258	1,395	1,770	2,598	2,999	1,262	1,577	1,887	2,168
Desert Research Institute	259	3,539	3,574	3,674	2,974	43	33	0	0
California State U., Monterey Bay	260	2,006	1,861	2,127	2,957	1,859	1,817	1,987	2,526
CUNY, Queens C.	261	1,250	1,599	2,738	2,914	1,054	1,155	1,535	2,311
South Dakota State U.	262	3,689	2,785	3,167	2,901	1,813	1,284	2,030	1,766
North Carolina A&T State U.	263	1,612	1,491	1,925	2,855	1,455	1,186	1,801	2,477
Alabama A&M U.	264	1,521 i	1,649 i	1,800 i	2,780 i	1,104 i	1,407 i	1,746 i	2,310 i
U. of the Virgin Islands	265	1,554	1,913	2,708	2,708	1,554	1,913	2,708	2,708
SUNY, C. of Environmental Science and Forestry	266	9,281	6,857	3,501 i	2,693	3,064	2,389	1,969	1,264
U. West Florida	267	1,690	2,018	2,741	2,634	409	679	702	668
Pepperdine U.	268	597	398	1,884	2,603	121	282	213	231
Williams C.	269	582 i	602 i	2,275 i	2,592 i	396 i	420 i	614 i	695 i
Alabama State U.	270	1,747	2,265	1,929	2,579	1,747	2,265	1,929	2,579
Tennessee Technological U.	271	1,167	1,325	1,709	2,525	870	1,010	1,300	1,883
U. Central Oklahoma	272	303 i	316 i	2,255 i	2,511 i	229 i	240 i	465 i	515 i
California State U., Long Beach	273	2,110	1,201	1,834	2,504	1,849	947	1,306	1,852
San Jose State U.	274	1,542	2,431	3,253	2,474	1,268	1,047	1,924	2,254
California State Polytechnic U., Pomona	275	1,818	1,555	1,753	2,459	1,365	1,216	1,250	1,826
James Madison U.	276	1,099	1,865	2,228	2,432	533	952	1,068	1,448
Albany C. of Pharmacy and Health Sciences	277	2,732	3,562	2,001	2,281 i	1,111	1,856	958	1,084 i
Ball State U.	278	1,412	1,536	1,644	2,251	689	727	1,036	1,377
Hope C.	279	629	1,130	2,209	2,212	282	408	2,130	2,076



TABLE 45

**Total and federally financed higher education R&D expenditures in the biological and biomedical sciences, ranked by FY 2023 total: FYs 2020–23**

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2020	2021	2022	2023	2020	2021	2022	2023
SUNY, Polytechnic Institute	280	1,977	2,412	1,529	2,209	1,297	1,233	1,529	1,724
Appalachian State U.	281	840	1,089	1,906	2,101	345	371	762	738
William & Mary	282	2,241	1,823	2,449	2,035	1,205	1,232	1,485	1,584
Wichita State U.	283	2,959	2,705	2,150	2,030	2,623	2,395	1,992	1,109
Villanova U.	284	2,133	2,053	1,743	2,029	333	562	690	842
Duquesne U.	285	3,648	1,239	1,627	2,010	1,178	849	1,080	1,287
Wesleyan U.	286	909	1,469	1,833	1,998	382	581	878	1,360
Oregon Institute of Technology	287	765 i	1,637 i	1,925 i	1,988 i	0	66 i	89 i	360 i
Chicago State U.	288	ne	ne	2,223	1,984	ne	ne	2,223	1,984
U. Alabama, Huntsville	289	2,046	1,411	1,508	1,982	583	300	366	823
Sul Ross State U.	290	0	1,265 i	1,618 i	1,974	0	119 i	169 i	220
U. Massachusetts, Dartmouth	291	1,390	1,725	2,225	1,935	253	211	191	213
Colorado School of Mines	292	1,549	2,458	2,627	1,925	1,513	1,927	1,985	1,218
Touro U., California	293	2,514	2,637	1,564	1,908	521	537	238	310
Smith C.	294	1,657	1,305	2,567	1,883	867	687	761	942
Murray State U.	295	2,399	2,962	2,351	1,868	1,496	2,117	1,419	987
Michigan Technological U.	296	2,392	1,772	1,963	1,836	901	672	567	561
Texas A&M U.-Kingsville	297	1,386	1,328	1,782	1,833	1,120	1,157	1,559	1,333
Indiana U. Pennsylvania	298	1,107	1,831	1,677	1,799	667	989	814	1,088
California State U., San Marcos	299	1,451	978	1,283	1,791	642	197	440	985
Long Island U.	300	621	734	2,155	1,779	58	30	61	220
U. Arkansas, Little Rock	301	2,833	1,957	1,502	1,771	2,143	1,955	1,471	1,701
Louisiana State U., Health Sciences Center, New Orleans	302	19,533	20,165	5,544	1,737	16,359	17,760	4,173	521
U. Nebraska, Omaha	302	2,254	1,034	1,778	1,737	2,192	952	1,492	1,052
Rochester Institute of Technology	304	1,238	1,551	1,657	1,731	668	763	765	864
Sam Houston State U.	305	1,382	2,145	2,162	1,721	379	869	837	760
Towson U.	306	531	450	824	1,709	361	305	490	680
U. Missouri, Saint Louis	307	1,567	1,869	1,782	1,691	1,025	1,238	1,354	1,125
Catholic U. of America	308	1,333	1,157	607	1,689	1,228	968	491	565
U. North Florida	309	907	1,243	1,451	1,666	310	720	786	870
Nova Southeastern U.	310	0	0	0	1,651	0	0	0	0
Montclair State U.	311	1,422	1,125	688	1,638	948	861	643	337
Azusa Pacific U.	312	126	174	240	1,616	0	0	0	0
Barnard C.	313	625	873	1,297	1,570	432	762	1,082	1,315
Fordham U.	314	1,435	1,207	1,213	1,566	883	717	575	718

TABLE 45

**Total and federally financed higher education R&D expenditures in the biological and biomedical sciences, ranked by FY 2023 total: FYs 2020–23**

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2020	2021	2022	2023	2020	2021	2022	2023
Swarthmore C.	315	841	824	1,295	1,516	439	428	820	1,180
C. Charleston	316	882	1,147	904	1,500	561	843	740	1,218
Reed C.	316	1,573	1,629	1,319	1,500	1,180	1,252	718	812
Amherst C.	318	1,064	1,259	1,741	1,485	608	527	1,269	826
California State U., San Bernardino	319	539	882	1,187	1,477	89	93	304	441
California State U., Channel Islands	320	707	807	1,143	1,469	0	0	311	472
CUNY, Graduate School of Public Health and Health Policy	321	688	492	784	1,439	688	492	784	1,439
Saint Joseph's U.	322	726	517	1,608	1,435	460	362	1,035	772
Black Hills State U.	323	783	800	1,391	1,399	658	648	1,114	1,157
Florida A&M U.	324	67	29	113	1,396	61	29	113	73
U. Maryland Center for Environmental Science	325	1,978	1,035	1,088	1,390	1,261	682	781	809
Tougaloo C.	326	503	501	1,207	1,367	503	501	1,207	1,366
Bucknell U.	327	743	674	1,238	1,360	361	354	777	948
Clark U.	328	1,134	1,059	1,052	1,359	705	649	518	511
CUNY, Graduate Center	328	116	110	6	1,359	87	92	0	0
U. Minnesota, Duluth	330	1,090	1,279	1,333	1,341	592	774	876	625
DePaul U.	331	296	371	865	1,313	264	281	865	1,273
Southeastern Louisiana U.	332	793	637	918	1,301	337	290	712	685
Loyola Marymount U.	333	407	637	2,001	1,296	233	243	665	317
Marian U., Indianapolis	333	ne	ne	ne	1,296	ne	ne	ne	326
Hofstra U.	335	337	590	709	1,288	308	358	483	627
South Carolina State U.	336	981	1,082	1,183	1,284	981	1,082	1,183	1,284
Colorado State U., Pueblo	337	1,676	1,845	1,115	1,260	1,081	1,248	853	782
Bowdoin C.	338	1,196	1,262	1,275	1,258	869	1,002	957	899
Hampton U.	339	783	872	1,056	1,252	783	872	1,056	1,252
Fisk U.	340	3,427	1,601	1,289	1,228	3,427	1,579	1,196	946
Clarkson U.	341	902	920	1,235	1,192	442	565	667	655
U. New Orleans	342	974	1,074	1,014	1,181	148	215	191	170
Missouri U. of Science and Technology	343	970	553	652	1,168	130	97	172	220
Western Kentucky U.	344	1,307	924	815	1,166	706	354	310	435
U. Maryland, Eastern Shore	345	269	120	616	1,148	269	120	616	1,117
Bryn Mawr C.	346	640	709	1,132	1,141	100	194	448	603
Texas Christian U.	347	311	138	248	1,126	57	138	209	189
Eastern Michigan U.	348	1,350	1,037	791	1,122	763	467	317	390
Bates C.	349	1,166	1,660	1,521	1,120	1,095	1,511	1,292	1,021

TABLE 45

**Total and federally financed higher education R&D expenditures in the biological and biomedical sciences, ranked by FY 2023 total: FYs 2020–23**

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2020	2021	2022	2023	2020	2021	2022	2023
Texas Woman's U.	350	562	251	977	1,105	430	123	977	1,105
Wellesley C.	351	1,454	1,554	1,033	1,104	1,326	1,418	859	781
Providence C.	352	422	414	ne	1,102	347	283	ne	853
U. Puget Sound	353	357	ne	707	1,086	223	ne	572	1,058
Grinnell C.	354	487	423	272	1,082	29	17	20	509
Seton Hall U.	355	138	607	463	1,059	138	607	463	508
U. Richmond	356	765	766	835	1,051	648	604	574	729
Middle Tennessee State U.	357	1,359	2,096	2,188	1,049	599	766	918	743
Louisiana Tech U.	358	753	749	1,249	1,045	232	194	210	325
California State U., Fresno	359	449	448	709	1,028	362	440	548	732
U. Northern Colorado	360	896	963	925	1,026	389	457	465	349
U. Akron	361	1,699	1,180	1,303	1,022	694	397	655	643
Lake Superior State U.	362	ne	ne	892	1,015	ne	ne	892	1,015
Haverford C.	363	926 i	313 i	604 i	997 i	109	95	325	721
C. New Jersey	364	649	819	1,116	996	328	347	631	688
Bowling Green State U.	365	909	1,125	1,515	995	376	631	842	595
American U.	366	1,235	719	661	979	476	282	252	345
Langston U.	367	1,650	510	1,402	964	1,650	510	1,020	891
Oklahoma State U., Center for Health Sciences	368	452	531	1,090	962	0	70	634	465
SUNY, Buffalo State U.	369	929	780	767	945	176	29	29	39
Gallaudet U.	370	853	525	577	939	0	0	63	185
New York Institute of Technology	370	283	227	372	939	283	227	372	939
Trinity U.	372	499	455	735	927	296	184	230	398
U. Tulsa	373	500	607	828	925	267	330	360	438
California State U., Los Angeles	374	1,949	476	773	924	1,512	319	597	852
CUNY, Brooklyn C.	375	1,792	1,505	630	893	1,363	1,341	547	805
Nevada State C.	376	ne	ne	1,016	890	ne	ne	994	890
Florida Institute of Technology	377	667	875	949	887	423	538	541	525
Hawaii Pacific U.	378	594	557	526	883	570	557	520	883
Southern U. and A&M C., Baton Rouge	379	128	261	605	882	128	261	605	882
U. Tennessee, Chattanooga	380	843	746	835	880	552	594	657	633
Roger Williams U.	381	177	521	695	852	166	367	482	444
Middlebury C.	382	506	1,017	692	827	374	999	643	801
California State U., Stanislaus	383	1,163	1,222	1,004	808	752	702	401	388
Montana Technological U.	384	708	661	656	803	339	305	335	492

TABLE 45

**Total and federally financed higher education R&D expenditures in the biological and biomedical sciences, ranked by FY 2023 total: FYs 2020–23**

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2020	2021	2022	2023	2020	2021	2022	2023
U. Colorado Denver <sup>f</sup>	385	na	1,012	1,076	799	na	942	941	687
Tarleton State U.	386	249	415	675	789	15	0	0	0
Northland C.	387	ne	602 i	688 i	783 i	ne	437 i	487 i	551 i
Spelman C.	387	604	484	347	783	604	484	347	783
U. South Carolina, Aiken	387	962	657	1,008	783	870	554	721	549
U. of the Pacific	390	641	687	1,160	782	326	434	767	782
Vassar C.	391	197	172	897	778	16	87	544	344
Northern Kentucky U.	392	458	562	561	773	257	330	368	430
California State U., Dominguez Hills	393	110	0	286	763	81	0	254	263
California State U., East Bay	394	439	478	340	754	58	57	13	87
U. Wisconsin-Oshkosh	395	731 i	735	617	748	635 i	630	511	490
West Virginia School of Osteopathic Medicine	396	629	522	666	737 i	52	59	119	127 i
Northern Michigan U.	397	430	644	974	734	30	73	230	320
Jackson State U.	398	1,045	691	750	733	804	591	668	625
Western Washington U.	399	721	548	455	724	243	175	328	386
U. Central Arkansas	400	398	462	612	714	242	303	405	591
Southern Illinois U., Edwardsville	401	1,047	2,023	589	711	271	467	457	543
Davidson C.	402	322	595	769	709	200	259	325	338
Colby C.	403	304	270	528	707	243	186	490	620
Trinity C., Hartford	404	908	1,062	965	706	861	884	811	319
U. Nebraska, Kearney	405	775	995	910	698	405	545	645	435
Colgate U.	406	478	507	676	692	84	331	170	273
Kean U.	407	63	0	976	680	0	0	89	203
Ursinus C.	408	ne	ne	ne	665	ne	ne	ne	578
California State U., Chico	409	184	111	63	661	170	111	63	654
St. John's U., New York	410	998	1,045	856	659	819	898	769	534
New C. Florida	411	ne	ne	ne	656	ne	ne	ne	21
CUNY, Lehman C.	412	255	181	335	654	136	78	283	576
Kenyon C.	413	534	ne	753	652	520	ne	689	563
Lewis and Clark C.	414	651	288	541	647	538	258	345	449
Northern Illinois U.	415	436	1,232	839	638	176	646	415	359
U. Wisconsin-La Crosse	416	667	603	813	631	402	397	486	315
Christopher Newport U.	417	644	536	625	628	160	70	293	122
Mount Holyoke C.	418	359	398	425	618	333	376	418	601
CUNY, Baruch C.	419	250	777	904	612	117	749	760	608

TABLE 45

**Total and federally financed higher education R&D expenditures in the biological and biomedical sciences, ranked by FY 2023 total: FYs 2020–23**

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2020	2021	2022	2023	2020	2021	2022	2023
U. Texas of the Permian Basin	420	328	962	844	585	328	962	797	522
U. of the Incarnate Word	421	327	268	303	577	14	81	194	443
Texas A&M International U.	422	9	185	173	575	0	65	66	230
Fort Lewis C.	423	231	352	499	574	187	352	493	555
New Mexico Institute of Mining and Technology	424	260	290	691	558	255	244	593	480
California State U., Bakersfield	425	223	189	46	553	70	53	29	286
U. San Francisco	426	65	81	640	552	0	19	102	283
Pennsylvania State U., Behrend	427	21	55	532	545	15	0	238	279
Franklin and Marshall C.	428	572	677	860	533	502	584	782	446
Austin Peay State U.	429	60	50	35	530	49	50	29	264
U. Guam	430	291	411	573	528	205	323	475	457
Harvey Mudd C.	431	520	364	605	524	444	316	534	417
Connecticut C.	432	275	232	477	518	48	89	152	257
CUNY, C. Staten Island	433	554	407	548	509	377	347	527	504
Pomona C.	434	338	288	318	500	180	202	223	170
U. Wisconsin-Green Bay	435	306 i	335 i	477 i	498 i	164 i	172 i	206 i	241 i
St. Olaf C.	436	90	182	ne	496	0	102	ne	287
Liberty U.	437	247	333	ne	495	44	45	ne	148
Calvin U.	438	329 i	355 i	381 i	490 i	273 i	273 i	274	348
Bowie State U.	439	414	96	319	485	414	96	319	485
Dillard U.	440	1,099	470	609	484	500	70	288	152
Salisbury U.	440	366	381	381	484	32	88	82	157
Grand Valley State U.	442	667	625	507	473	262	303	273	318
Furman U.	443	335	309	375	468	309	281	283	219
New Mexico Highlands U.	444	171	254 i	361 i	467	115	245 i	352 i	458
U. Hawaii, Hilo	445	1,548	996	560	461	1,145	657	293	331
Santa Clara U.	446	576	386	308	457	463	356	282	379
Dine C.	447	0	ne	0	453	0	ne	0	410
Pennsylvania State U., Harrisburg	448	82	248	607	450	76	18	311	272
California State U., Sacramento	449	682	735	452	444	125	126	132	320
U. Colorado Colorado Springs	450	716	728	332	443	651	718	313	343
U. Washington, Tacoma	451	1	203	276	442	0	203	276	442
Minnesota State U., Mankato	452	63	329	437	434	0	300	313	294
U. San Diego	453	92	37	169	432	31	19	39	75
Purdue U., Fort Wayne	454	483	252	343	431	117	44	20	55

TABLE 45

**Total and federally financed higher education R&D expenditures in the biological and biomedical sciences, ranked by FY 2023 total: FYs 2020–23**

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2020	2021	2022	2023	2020	2021	2022	2023
California Polytechnic State U., San Luis Obispo	455	1,009	707	844	423	609	464	632	214
Southern Connecticut State U.	456	357	132	323	418	17	16	126	129
Elizabeth City State U.	457	435	751	628	415	428	751	628	415
West Chester U. Pennsylvania	457	459	350	437	415	337	240	228	236
U. Puerto Rico, Ponce	459	ne	ne	ne	401	ne	ne	ne	382
National Defense U.	460	200	400	400	400	200	400	400	400
Xavier U. Louisiana	460	1,070	378	398	400	987	354	385	378
Winston-Salem State U.	462	684	189	542	399	677	189	467	399
U. Texas, Tyler	463	541	774	653	397	259	540	596	246
Florida Gulf Coast U.	464	0	94	179	386	0	62	45	79
Missouri State U.	465	651	850	634	382	475	517	422	222
Rutgers, State U. New Jersey, Camden	466	225	13	275	363	0	0	0	0
Rhode Island C.	467	540	1,041	611	358	504	1,021	607	358
Bryant U.	468	ne	ne	ne	353	ne	ne	ne	347
Occidental C.	468	278	279	312	353	199	279	312	353
Sonoma State U.	470	197	170	349	352	161	169	341	339
Oberlin C.	471	285	230	ne	351	252	214	ne	326
Western Carolina U.	472	279	421	332	345	66	205	229	202
Skidmore C.	473	85	351	111	341	69	330	108	241
Claffin U.	474	857	492	382	337	854	482	382	337
Northeastern Illinois U.	475	249	351	335	325	249	351	335	325
Central Washington U.	476	428	336	266	324	179	122	42	20
Butler U.	477	ne	ne	583	321	ne	ne	544	258
Coastal Carolina U.	477	98	173	368	321	98	75	109	137
Norfolk State U.	479	114	88	93	317	114	88	93	54
California State Polytechnic U., Humboldt	480	1,302	1,028	606	316	552	151	227	161
Winthrop U.	481	100	240	314	308	64	103	166	150
Macalester C.	482	297	108	142	305	121	10	61	116
Pacific U.	483	160	121	454	292	25	76	77	139
Seattle U.	484	156	29	200	286	86	25	103	133
SUNY, Geneseo	484	131	108	152	286	58	61	85	196
CUNY, York C.	486	485	129	288	282	450	71	221	245
U. Puerto Rico, Mayaguez	487	1,067	865	405	275	918	865	348	273
U. Alaska, Southeast	488	374	723	310	264	369	710	285	210
Whitman C.	489	427	ne	284	263	302	ne	89	75

TABLE 45

**Total and federally financed higher education R&D expenditures in the biological and biomedical sciences, ranked by FY 2023 total: FYs 2020–23**

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2020	2021	2022	2023	2020	2021	2022	2023
Utah Valley U.	490	ne	ne	380	256	ne	ne	261	237
Lamar U.	491	55	23	131	255	27	0	28	50
Mercer U.	491	235	250	253	255	0	0	0	0
Ferris State U.	493	ne	ne	ne	249	ne	ne	ne	229
Morehouse C.	494	120	90	263	247	120	90	263	247
U. Wisconsin-Platteville	495	111 i	191 i	224 i	246 i	41 i	53 i	65 i	69 i
Eastern Washington U.	496	186	193	79	244	155	188	63	241
Morehead State U.	497	211	728	315	242	211	721	90	181
Texas A&M U.-San Antonio	498	ne	ne	137	241	ne	ne	48	206
Claremont McKenna C.	499	396	274	272	239	396	274	272	239
U. Scranton	500	ne	ne	ne	238	ne	ne	ne	138
Saint John's U.	501	104 i	180 i	208 i	237 i	0 i	0 i	0 i	0 i
Lincoln Memorial U.	502	ne	ne	ne	235	ne	ne	ne	0
Willamette U.	502	169	472	832	235	35	367	411	143
C. of Saint Benedict	504	116 i	178 i	205 i	234 i	0 i	14 i	16 i	18 i
U. Washington, Bothell	504	0	493	254	234	0	323	254	214
Gettysburg C.	506	257	ne	ne	233	13	ne	ne	39
Monmouth U.	506	85	35	98	233	0	0	51	122
Stephen F. Austin State U.	508	57	80	60	232	0	0	0	69
U. South Alabama	509	87	232	376	221	41	133	162	80
St. Edward's U.	510	825	825	390	220	800	800	270	110
U. Northern Iowa	511	104	164	104	219	35	0	44	134
Tennessee State U.	512	2,425	2,958 i	2,132	218	2,266	2,958 i	2,132	218
Carleton C.	513	256	501	246	217 i	82	115	87	127 i
Pace U.	513	431	296	225	217	386	288	178	108
Eastern Kentucky U.	515	609	488	ne	212	334	335	ne	154
Wheaton C., Wheaton	516	23	24	ne	209	0	0	ne	0
U. Dayton	517	217	163	225	206	205	163	211	179
Prairie View A&M U.	518	379	353	258	204	369	320	255	204
Lafayette C.	519	87	93	649	197	50	55	573	96
C. Wooster	520	242	339 i	400	195	76	70 i	102	42
Hamilton C.	521	81	122	116	190	26	86	75	26
Radford U.	522	ne	ne	ne	186	ne	ne	ne	53
St. Cloud State U.	523	349	270	348	183	126	6	56	0
Abilene Christian U.	524	ne	101	185	179	ne	0	0	0

TABLE 45

**Total and federally financed higher education R&D expenditures in the biological and biomedical sciences, ranked by FY 2023 total: FYs 2020–23**

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2020	2021	2022	2023	2020	2021	2022	2023
Southern U. and A&M C., Agricultural Research and Extension Center	525	298	295	306	178	0	140	140	0
U. Southern Maine	526	195	180	180	177	60	63	55	38
CUNY, system office	527	84	37	38	174	84	37	38	45
U. Louisiana, Monroe	528	410	298	291	166	409	298	291	144
CUNY, New York City C. of Technology	529	496	362	298	162	394	311	293	162
Purdue U., Northwest	529	18	29	47	162	5	28	47	28
Albany State U.	531	143	94	ne	158	143	94	ne	158
Hobart and William Smith Colleges	531	79	45	298	158	39	37	217	120
Stevens Institute of Technology	533	0	94	1,245	157	0	83	833	104
Lincoln U.	534	ne	ne	ne	153	ne	ne	ne	153
U. Wisconsin-River Falls	534	99	94	ne	153	46	16	ne	50
U. New Haven	536	35	121	101	151	9	25	31	111
Biola U.	537	150 i	157 i	170	149	0 i	0 i	0	0
U. North Carolina, Asheville	538	493	322	53	143	73	14	35	111
U. of St. Thomas (MN)	538	514	182	286	143	242	113	102	99
U. Virginia's C. Wise	540	ne	125	0	139	ne	111	0	139
Sacred Heart U.	541	ne	0	ne	136	ne	0	ne	0
U. Houston-Clear Lake	542	44	42	134	135	20	38	83	105
Youngstown State U.	543	74	14	254	134	0	0	231	131
Central State U.	544	59	164	203	133	59	164	203	133
Indiana State U.	545	690	456	335	129	327	78	75	0
U.S. Military Academy	546	421	1,318	132	120	295	1,250	130	120
Manhattan C.	547	56	49	37	114	0	0	0	0
Union C., Schenectady	548	45	64	143	108	13	4	41	0
Colorado C.	549	121	144	128	107	20	1	0	0
Norwich U.	550	ne	ne	ne	104	ne	ne	ne	95
U. of Mary Washington	550	132	155	190	104	85	119	111	78
Elon U.	552	140	108	49	102	0	39	0	22
Pittsburg State U.	553	178	110	254	100	178	109	254	100
U. Wisconsin-Eau Claire	554	80	174	111	98	30	42	0	23
U. Houston-Downtown	555	46	25	135	97	0	0	93	71
U. Hawaii, Maui C.	556	ne	253	ne	96	ne	241	ne	85
Central Connecticut State U.	557	131	142	121	95	73	97	23	7
Marymount U.	558	ne	93	15	92	ne	0	0	66
East Stroudsburg U. Pennsylvania	559	ne	ne	0	89	ne	ne	0	85



TABLE 45

**Total and federally financed higher education R&D expenditures in the biological and biomedical sciences, ranked by FY 2023 total: FYs 2020–23**

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2020	2021	2022	2023	2020	2021	2022	2023
Virginia Military Institute	560	ne	ne	83	88	ne	ne	0	0
Texas A&M U.-Commerce	561	144	31	18	82	8	0	0	0
Dakota State U.	562	48	0	0	81	48	0	0	81
SUNY, Oswego	563	281	129	151	80	190	72	82	39
Eastern Connecticut State U.	564	376	205	157	78	177	107	35	38
U. Michigan, Dearborn	564	121	75	99	78	112	75	99	70
Grambling State U.	566	0	0	108 i	74	0	0	108 i	74
Stockton U.	566	105	0	62	74	39	0	62	74
U. North Georgia	568	16	31	26	68	16	31	26	24
U. South Carolina, Beaufort	569	ne	ne	ne	67	ne	ne	ne	0
Drake U.	570	ne	17	62	65	ne	8	58	63
Gustavus Adolphus C.	571	ne	ne	ne	64	ne	ne	ne	20
U. Puerto Rico, Cayey	572	601	392	30	63	237	145	30	45
Fayetteville State U.	573	408	30	56	62 i	408	30	56	62 i
Indiana U., South Bend	574	ne	49	ne	57	ne	0	ne	0
Ithaca C.	575	138	128	190	55	132	109	170	43
U. Puerto Rico, Humacao	575	229	86	1	55	229	86	1	55
Virginia State U.	577	24	83	61	52	24	38	44	52
William Paterson U.	578	512	571	821	50	81	201	461	23
Citadel Military C. South Carolina	579	75	103	196	47	49	77	124	24
U. Arkansas, Pine Bluff	579	74	0	8	47	58	0	6	20
Fairfield U.	581	230	14	ne	43	191	0	ne	0
Andrews U.	582	3	0	ne	41	0	0	ne	0
Suffolk U.	583	29	33	19	30	29	33	14	30
U. Wisconsin-Stevens Point	583	214	205	119	30	2	2	6	3
Pennsylvania State U., Altoona	585	ne	ne	ne	29	ne	ne	ne	0
SUNY, C. Brockport	586	299	67	39	27	291	61	20	7
Troy U.	586	176	62	41	27	157	37	2	0
Claremont Graduate U.	588	0	0	0	25	0	0	0	25
U. Hartford	589	0	0	10	24	0	0	3	0
U. of the District of Columbia	589	0	63	0	24	0	63	0	24
Northwestern State U. Louisiana	591	131	7	19	21 i	0	0	0	0 i
Lipscomb U.	592	0 i	0	ne	17	0 i	0	ne	0
Robert Morris U.	592	ne	ne	15 i	17	ne	ne	0 i	0
Savannah State U.	594	22	3	6	15	22	3	6	15

TABLE 45

**Total and federally financed higher education R&D expenditures in the biological and biomedical sciences, ranked by FY 2023 total: FYs 2020–23**

(Dollars in thousands)

Institution	Rank	Total				Federally financed			
		2020	2021	2022	2023	2020	2021	2022	2023
West Texas A&M U.	594	21	10	0	15	0	0	0	0
Framingham State U.	596	0	411 i	211 i	10	0	0 i	0 i	0
Western Illinois U.	596	852	334	30	10	653	274	8	0
La Sierra U.	598	101	5	7	8 i	4	0	0	0 i
Merrimack C.	599	0	ne	ne	7	0	ne	ne	0
U. Illinois, Springfield	600	1	2	1	3	0	0	0	3
All other surveyed institutions	-	164,546	145,490	144,225	0	102,096	98,484	96,265	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.

<sup>a</sup> Johns Hopkins University includes the Applied Physics Laboratory (APL), with \$26,624 thousand imputed for total and \$25,807 thousand reported for federally financed R&D expenditures in biological and biomedical sciences in FY 2023. 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.

<sup>b</sup> 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.

<sup>c</sup> The University of Nebraska, Lincoln and Medical Center includes expenditures from the University of Nebraska, Lincoln; University of Nebraska, Medical Center; and University of Nebraska, Central Administration campuses. Due to a realignment within the University of Nebraska system that occurred on 22 June 2023, the three campuses fall under the leadership of one president. Prior to FY 2023, these three campuses reported to the survey as separate institutions.

<sup>d</sup> 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.

<sup>e</sup> Touro University, New York includes the Lovelace Biomedical Research Institute. In FY 2023, the Lovelace Biomedical Research Institute joined the Touro University System.

<sup>f</sup> 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 2023 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.