



B UNPACKING BOSTON'S FY2024 NIH FUNDING

City of Boston Planning Department Research Division

This report examines the National Institutes of Health (NIH) funding received by Boston in fiscal year 2024. As a global leader in life sciences, Boston was awarded nearly \$2.5 billion across 4,194 grants from the NIH, making it the second-largest recipient of NIH funding nationwide. The majority of funding was awarded to the city's top hospitals, including Massachusetts General Hospital, Brigham and Women's Hospital, and Boston Children's Hospital. While research institutes and private biotech firms also received support, hospital-based research dominated the allocation.

Despite a slight 2% decrease from FY2023, Boston's NIH funding remains historically high, representing 6.6% of all U.S. NIH funding and 71% of Massachusetts' share. Boston leads the nation in per capita NIH funding at \$492, surpassing other major research hubs such as New York City and Philadelphia. The city's robust biomedical research ecosystem benefits from a highly educated workforce, extensive university partnerships, and a concentration of research institutions, particularly in the Longwood Medical Area.

As part of a regional research powerhouse, Boston collaborates closely with institutions in Cambridge and beyond, further strengthening its position in life sciences innovation. This report highlights the key trends in Boston's NIH funding, its distribution among different sectors, and its broader impact on the region's economy and scientific advancements.



ABOUT NIH

The National Institutes of Health (NIH), part of the U.S. Department of Health and Human Services, is the largest source of funding for medical research in the world. Its mission is “to seek fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to enhance health, lengthen life, and reduce illness and disability.”¹ NIH is made up of 27 Institutes and Centers, each with a specific research agenda.² More than 80% of the \$46 billion NIH budget goes to funding researchers outside the NIH – at more than 2,500 universities and research organizations.³

NIH provides funding for both direct and indirect research costs. Direct costs pay for project-specific equipment and inputs, including labor. Indirect costs for “facilities” and “administration” include maintenance of equipment, facility upgrades, operation of labs, depreciation, employment of support staff, accounting, research compliance, legal expenses, and research administrator salaries.⁴ Each institution negotiates its own overhead rate for facilities and administration with the government every few years. Rates vary widely based on geography (higher in urban areas) and field of research (for example, biomedical science may require expensive equipment or animal facilities) and may still not cover all research costs.⁵ NIH indirect cost rates have averaged 27-28% of direct costs over time, but Boston institutions have higher indirect cost rates. Several charts in this report illustrate the breakdown of direct and indirect funding received by various organizations.

BOSTON’S FY2024 NIH FUNDING

Boston’s status as a global leader in life sciences is closely tied to the significant support it receives from the NIH. In fiscal year 2024, running from October 1, 2023, to September 30, 2024, Boston received the second-highest amount of NIH funding of any city nationwide at almost \$2.5 billion

¹ National Institutes of Health, “About NIH,” last reviewed October 24, 2024. <http://www.nih.gov/about-nih/what-we-do/mission-goals>.

² National Institutes of Health, “Institutes at NIH.” <https://www.nih.gov/institutes-nih>

³ National Institutes of Health, “Budget,” last reviewed October 3, 2024. <https://www.nih.gov/about-nih/what-we-do/budget>.

⁴ Nietzel, M. T. “NIH Cuts Back Its Payment Of Indirect Costs For University Research,” February, 8, 2025. <https://www.forbes.com/sites/michaelt Nietzel/2025/02/08/nih-cuts-back-its-payment-of-indirect-costs-for-university-research/>

⁵ Malakoff, D. “NIH slashes overhead payments for research, sparking outrage and lawsuit,” February 7, 2025. <https://www.science.org/content/article/nih-slashes-overhead-payments-research-sparking-outrage>



across 4,194 total grants to 56 organizations. Boston accounted for 6.6% of all NIH funding sent to United States organizations last fiscal year, and 71% of funding sent to Massachusetts organizations. Of Boston’s NIH funding in FY2024, approximately \$1.8 billion was for direct research costs and almost \$700 million was for indirect research costs. Indirect cost funding made up 38% of direct cost funding and 28% of total NIH funding to Boston.

Most NIH funding to Boston institutions was awarded to the city’s leading hospitals and medical schools. Massachusetts General Hospital received the most funding with over 1,000 awards during FY2024. Brigham and Women’s Hospital and Boston Children’s Hospital took the second and third spots, respectively, in top recipients of funding. Massachusetts General Hospital and Brigham and Women’s Hospital are in the process of merging their academic medical centers under the name Mass General Brigham, making the combined organization the largest recipient of NIH funding in the country. Several private companies specializing in biomedical research also received funding, however the majority received only one award each, typically totaling around \$1 million. The bulk of Boston’s funding went to larger healthcare institutions.

TOP 10 BOSTON ORGANIZATIONS BY NIH FUNDING
FY2024

RANK	ORGANIZATION NAME	AWARDS	DIRECT FUNDING (MILLIONS)	INDIRECT FUNDING (MILLIONS)	TOTAL FUNDING (MILLIONS)
1	Massachusetts General Hospital	1,052	\$487	\$171	\$655
2	Brigham and Women's Hospital	675	\$281	\$120	\$388
3	Boston Children's Hospital	429	\$159	\$77	\$230
4	Boston University Medical Campus	285	\$146	\$46	\$191
5	Harvard Medical School	355	\$120	\$52	\$172
6	Dana-Farber Cancer Institute	243	\$113	\$52	\$164
7	Harvard School of Public Health	172	\$125	\$33	\$156
8	Beth Israel Deaconess Medical Center	214	\$86	\$36	\$120
9	Tufts University, Boston Campus	129	\$56	\$17	\$73
10	Boston University, Charles River Campus	166	\$48	\$19	\$67
TOTAL CITYWIDE		4,194	\$1,776	\$680	\$2,456

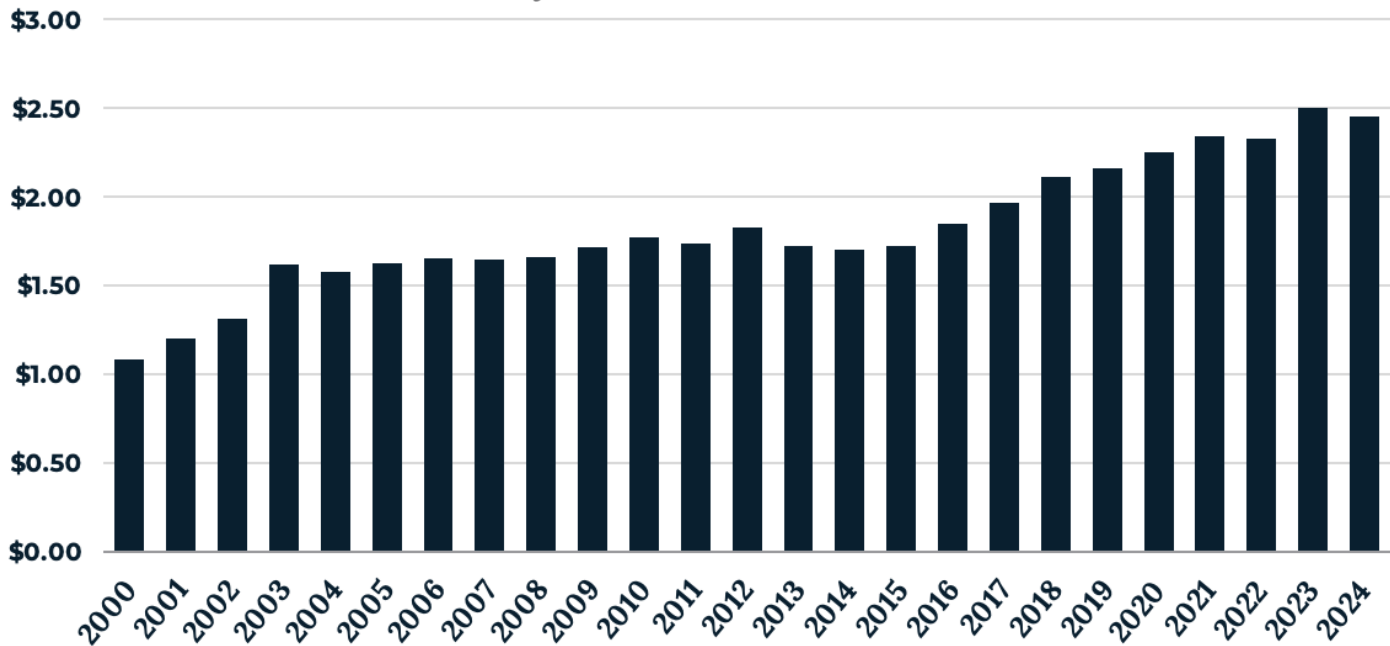
Source: National Institutes of Health, "NIH Awards by Location and Organization," FY2024, City of Boston Planning Department Research Division Analysis.

BOSTON’S NIH FUNDING OVER TIME

Boston has a well-established history of NIH funding, having received over \$45 billion from NIH since FY2000. FY2024 saw a 2% decrease in funding since FY2023, but is still the second-highest fiscal year in annual funding received by Boston organizations.

ANNUAL NIH FUNDING AWARDED TO BOSTON ORGANIZATIONS

FY2000 - FY2024, in billions of nominal dollars



Source: National Institutes of Health, "NIH Awards by Location and Organization," FY2024, City of Boston Planning Department Research Division Analysis.

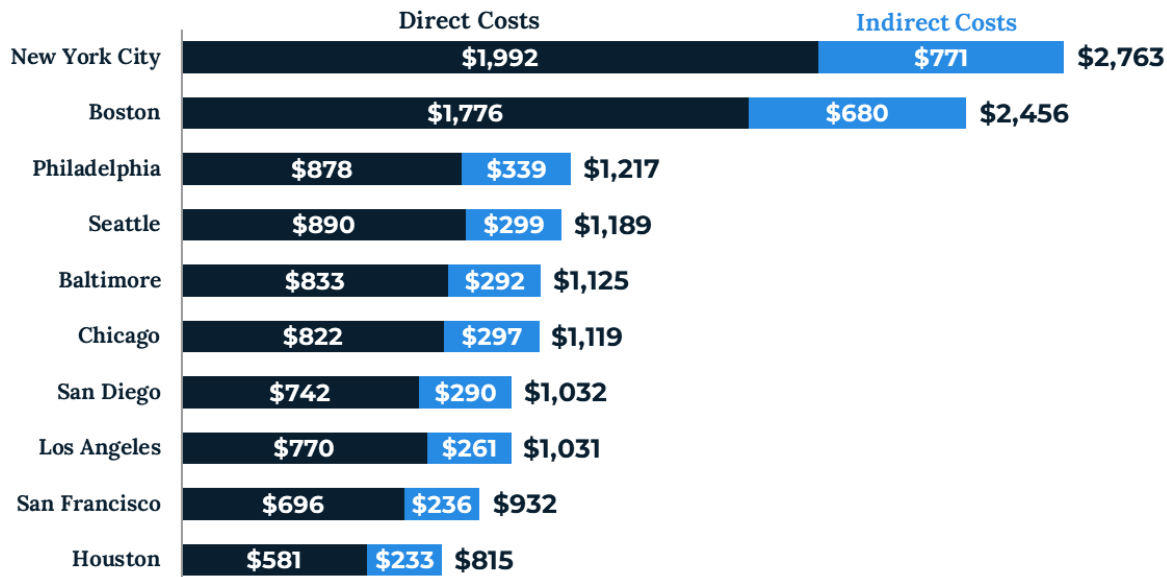
TOP FUNDED U.S. CITIES

Boston ranked second among U.S. cities in total NIH funding in FY2024, receiving about \$300 million less than New York City. Boston received \$492 in NIH funding per capita in FY2024, which is the highest per capita funding among the top 10 funded cities. Following Boston are Philadelphia, Seattle, and Los Angeles, each receiving less than half the amount of funding that Boston did.



TOP 10 U.S. CITIES IN NIH FUNDING

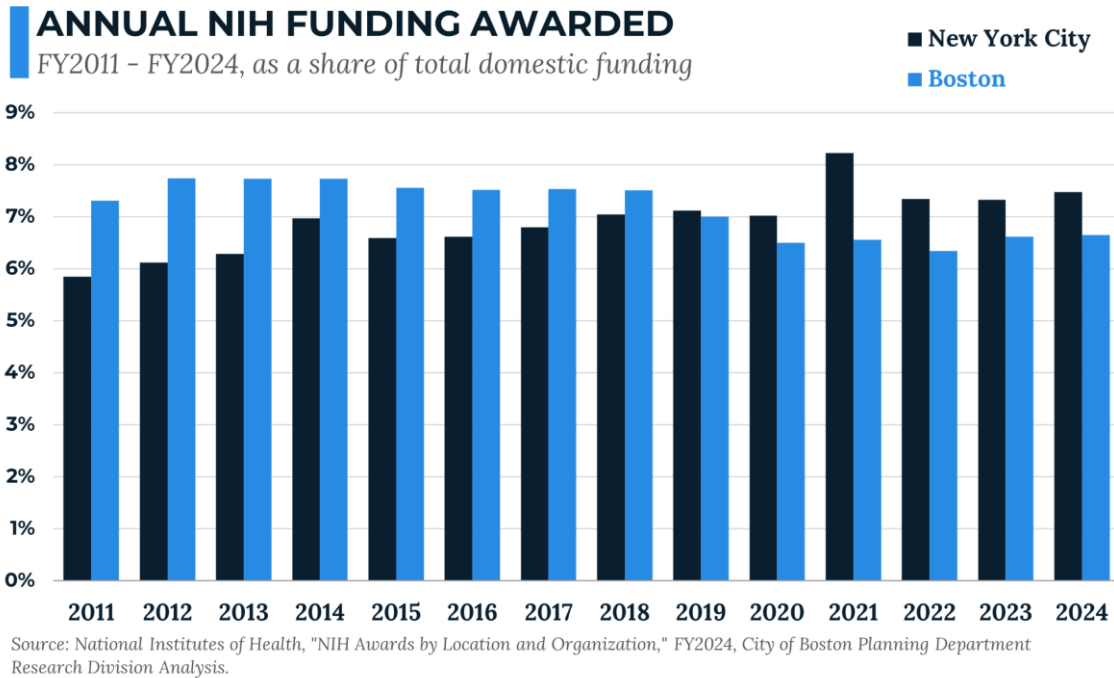
FY2024, in millions of dollars



Source: National Institutes of Health, "NIH Awards by Location and Organization," FY2024, City of Boston Planning Department Research Division Analysis.

The top 10 cities received about 37% of total domestic funding. Boston received about 6.65%, increasing slightly from 6.62% in FY2023. Boston was the leading U.S. city in annual NIH funding prior to FY2019, but has since been surpassed by New York City, which received 7.48% of total domestic funding in FY2024.





TOP FUNDED U.S. ORGANIZATIONS

Boston's two largest hospitals, Massachusetts General Hospital (ranked 7th) and Brigham and Women's Hospital (ranked 24th), were two of only three hospitals listed among the top 25 NIH funding recipients in the United States. Together, they received 1,727 awards and over \$1 billion in funding in FY2024.

Their combined funding represents 30% of Massachusetts' and 42% of Boston's entire NIH funding. The majority (20 out of 25) of the top organizations that received funding are higher education institutions. Vanderbilt University Medical Center rounds out the three hospitals listed among the top 25. Leidos Biomedical Research, Inc. is the only listed for-profit organization, and Research Triangle Institute is the only research institute listed.



TOP 25 U.S. ORGANIZATIONS BY NIH FUNDING FY2024

RANK	ORGANIZATION NAME	CITY	AWARDS	DIRECT FUNDING (MILLIONS)	INDIRECT FUNDING (MILLIONS)	TOTAL FUNDING (MILLIONS)
1	Johns Hopkins University	Baltimore, MD	1509	\$629	\$229	\$858
2	University of California, San Francisco	San Francisco, CA	1452	\$603	\$212	\$815
3	University of Michigan at Ann Arbor	Ann Arbor, MI	1385	\$534	\$200	\$734
4	Washington University	Saint Louis, MO	1189	\$544	\$188	\$732
5	University of Pennsylvania	Philadelphia, PA	1295	\$488	\$203	\$691
6	University of Pittsburgh at Pittsburgh	Pittsburgh, PA	1236	\$475	\$186	\$661
7	Massachusetts General Hospital	Boston, MA	1052	\$485	\$170	\$655
8	Yale University	New Haven, CT	1196	\$447	\$199	\$646
9	Columbia University Health Sciences	New York, NY	1067	\$459	\$180	\$639
10	Stanford University	Stanford, CA	1153	\$441	\$172	\$613
11	Duke University	Durham, NC	1005	\$424	\$156	\$580
12	University of Washington	Seattle, WA	1012	\$423	\$149	\$573
13	University of California, San Diego	San Diego, CA	1035	\$399	\$162	\$561
14	Leidos Biomedical Research, Inc.	Frederick, MD	105	\$554	\$0	\$554
15	University of North Carolina Chapel Hill	Chapel Hill, NC	1052	\$399	\$132	\$531
16	University of California Los Angeles	Los Angeles, CA	874	\$378	\$118	\$496
17	New York University School of Medicine	New York, NY	611	\$371	\$120	\$490
18	Icahn School of Medicine at Mount Sinai	New York, NY	735	\$348	\$142	\$490
19	Emory University	Atlanta, GA	918	\$360	\$128	\$488
20	Vanderbilt University Medical Center	Nashville, TN	568	\$358	\$126	\$484
21	Northwestern University at Chicago	Chicago, IL	720	\$297	\$122	\$419
22	University of Wisconsin-Madison	Madison, WI	678	\$301	\$107	\$408
23	Research Triangle Institute	Research Triangle Park, NC	92	\$373	\$24	\$397
24	Brigham And Women's Hospital	Boston, MA	675	\$270	\$118	\$388
25	University of Minnesota	Minneapolis, MN	768	\$277	\$103	\$380

Source: National Institutes of Health, "NIH Awards by Location and Organization," FY2024, City of Boston Planning Department Research Division Analysis.

FUNDING BY ORGANIZATION TYPE

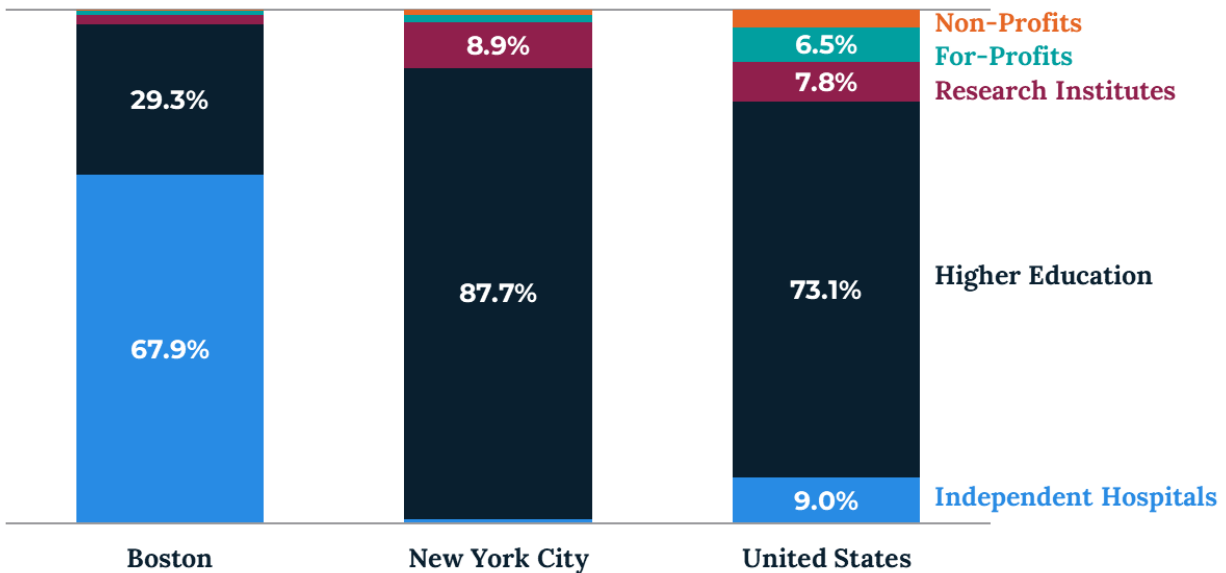
Boston's prominence as a healthcare research hub can be attributed to its world-class hospitals. NIH funding to hospitals exceeded two-thirds of Boston's total NIH funding in FY2024 compared to only 9% of national funding sent to hospitals. The NIH also provides vital funds to research institutes, private companies, and other organizations. The major research institutes that received NIH funding in Boston were the Joslin Diabetes Center, the Boston VA Research Institute, and the Schepens Eye Research Institute, an affiliate of Massachusetts Eye and Ear Infirmary.

Despite Boston's robust hospital funding, the vast majority of NIH funding allocated across the country was granted to higher education institutions. In fact, nearly 88% of New York City's NIH funding was directed towards higher education. Boston's independent hospitals, however, are closely affiliated with Boston's leading medical schools and universities, and many serve as teaching hospitals for medical students.



NIH FUNDING BY TYPE OF INSTITUTION

FY2024



Source: National Institutes of Health, "NIH Awards by Location and Organization," FY2024, City of Boston Planning Department Research Division Analysis.

HOSPITALS AND HEALTH CENTERS

The top ten hospitals in Boston received 2,819 awards and over \$1.6 billion in NIH funding, which is more than any other city received in total funding, apart from New York City. NIH allocated 7% of the total domestic funding towards Boston hospitals, demonstrating its recognition of Boston's hospitals as national leaders in healthcare and biomedical research. The top ten Boston hospitals received 48% of all the funding given to Massachusetts and just over 67% of Boston's total NIH funding. Five of the top ten NIH-funded independent hospitals in the United States were located in Boston, receiving approximately 48% of NIH funding allocated to independent hospitals nationwide. Additionally, among the top 25 NIH-funded hospitals in the country, Boston claims eight.



TOP 10 U.S. HOSPITALS BY NIH FUNDING

FY2024

RANK	ORGANIZATION NAME	CITY	AWARDS	DIRECT FUNDING (MILLIONS)	INDIRECT FUNDING (MILLIONS)	TOTAL FUNDING (MILLIONS)
1	Massachusetts General Hospital	Boston, MA	1,052	\$485	\$170	\$655
2	Vanderbilt University Med. Center	Nashville, TN	568	\$358	\$126	\$484
3	Brigham And Women's Hospital	Boston, MA	675	\$270	\$118	\$388
4	Boston Children's Hospital	Boston, MA	429	\$154	\$76	\$230
5	Dana-Farber Cancer Institute	Boston, MA	243	\$112	\$52	\$164
6	Children's Hosp Of Philadelphia	Philadelphia, PA	292	\$114	\$49	\$164
7	Cincinnati Children's Hosp Med. Center	Cincinnati, OH	283	\$114	\$47	\$160
8	Beth Israel Deaconess Med. Center	Boston, MA	214	\$84	\$36	\$120
9	Seattle Children's Hospital	Seattle, WA	149	\$92	\$27	\$119
10	St. Jude Children's Research Hospital	Memphis, TN	162	\$79	\$32	\$112

Source: National Institutes of Health, "NIH Awards by Location and Organization," FY2024, City of Boston Planning Department Research Division Analysis.

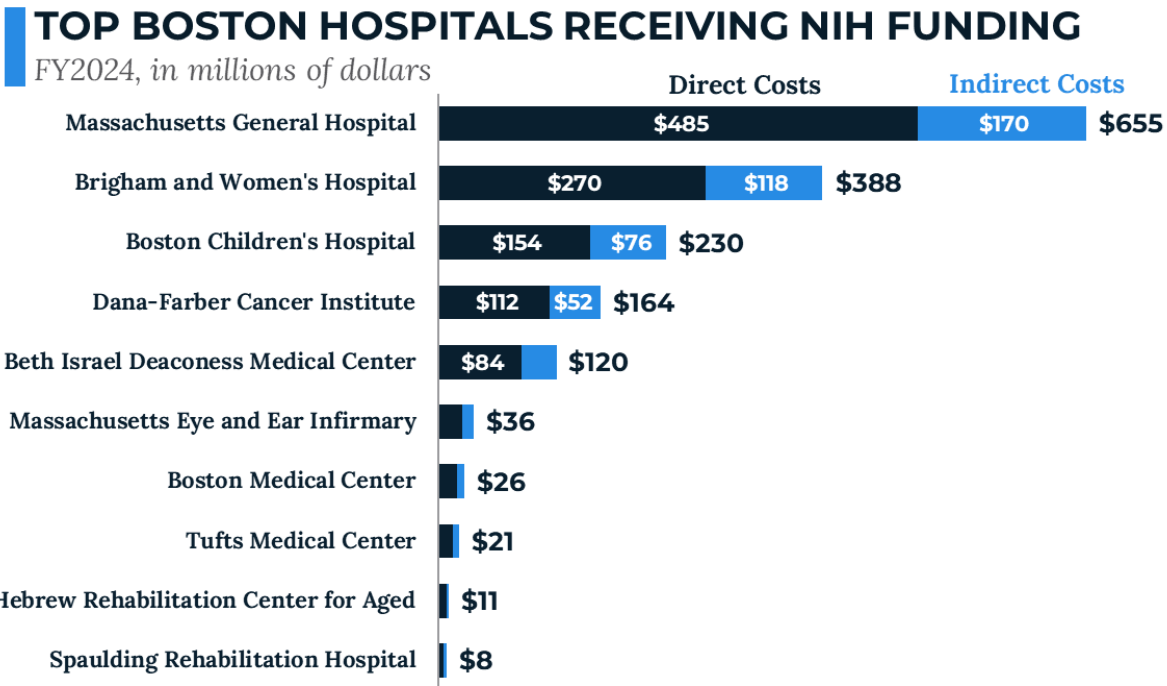
Massachusetts General Hospital was the top NIH-funded hospital in the United States, and Brigham and Women's Hospital, Boston Children's Hospital, and Dana-Farber Cancer Institute took the third, fourth, and fifth spots respectively. Mass General Brigham, an integrated health care system and national leader in biomedical research, comprises Massachusetts General Hospital, Brigham and Women's Hospital, and a handful of other NIH-funded hospitals. Mass General Brigham members serve as teaching hospitals for Harvard Medical School.⁶ Massachusetts General, as the top-funded hospital in Boston, received 39% of all grants awarded to the city's hospitals. The hospital's research involves more than 9,500 people, including one third of their physicians, across 30 departments and 1.3 million square feet of research space, making it the largest hospital-based research program in the United States.⁷ While Massachusetts General Hospital is located near downtown Boston in the West End, most NIH-funded Boston hospitals are located in the Longwood Medical Area. Located between Brookline, and Mission Hill, Longwood Medical Area includes top medical institutions such as Brigham and Women's Hospital, Beth Israel Deaconess Medical Center, Dana Farber Cancer Institute, and others. As of 2021, Longwood Medical Area employs 68,000 people, educates 27,000 people, and treats 2.8 million

⁶ Mass General Brigham, "Integrated Healthcare System," <https://www.massgeneralbrigham.org/en/about/our-story/integrated-healthcare-system>

⁷ Massachusetts General Hospital, "Research Institute by the Numbers," <https://www.massgeneral.org/research/about/research-institute-by-the-numbers>



patients annually.⁸ Longwood Medical Area received over \$1.3 billion in NIH funding, which is more than 42 states received in total.



Source: National Institutes of Health, "NIH Awards by Location and Organization," FY2024, City of Boston Planning Department Research Division Analysis.

HIGHER EDUCATION

Boston's success in biomedical research is attributed to its highly educated workforce, with 55% of Bostonians aged 25 and over holding a Bachelor's degree or higher,⁹ compared to 34% nationally. The City's colleges and universities enrolled 159,720 undergraduate and graduate students in Fall 2022, representing about 18% of Massachusetts' total student population, despite less than 10% of the state's population living in Boston.¹⁰ This concentration of scholars benefits companies, hospitals, and research institutes in Boston, leveraging partnerships with prestigious educational institutions and the surrounding advanced industries in biotechnology, science, and

⁸ Longwood Collective, "Longwood: A Critical Massachusetts Economic and Job-Creation Engine," last modified May 4, 2021. <https://www.longwoodcollective.org/news/longwood-critical-massachusetts-economic-and-job-creation-engine>

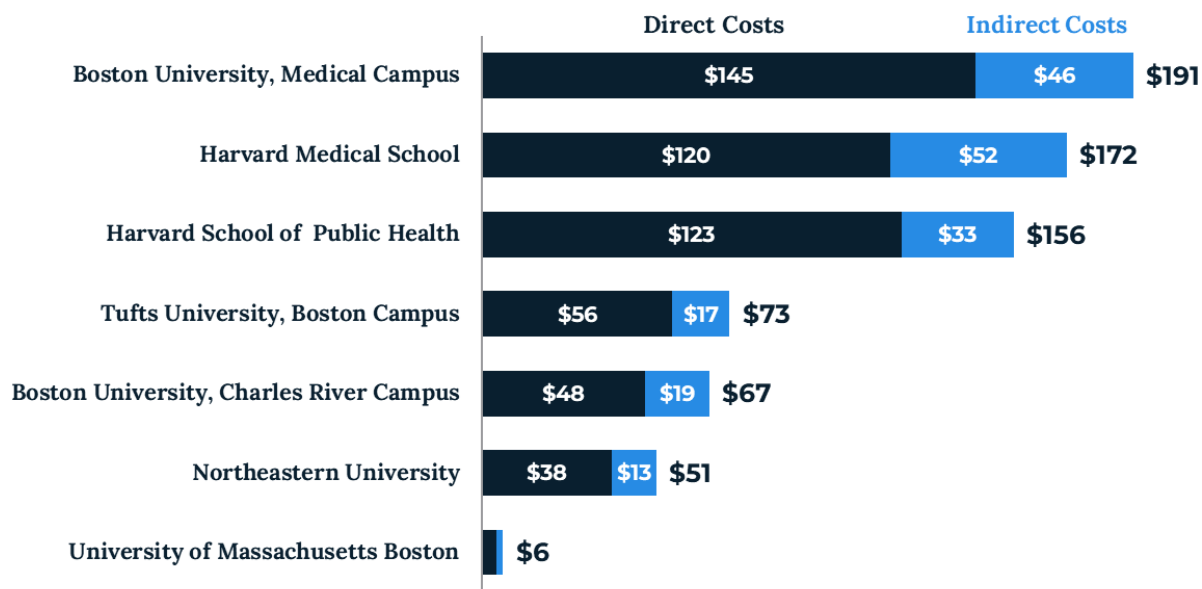
⁹ City of Boston Planning Department Research Division, "MyDemographic Viewer 2024." <https://maps.bostonplans.org/census/#/demographicviewer2024>

¹⁰ City of Boston Planning Department Research Division, "Higher Education in Boston," last modified September 9, 2023. <https://www.bostonplans.org/getattachment/142fdff6-99d8-4df6-983d0b43ae492345>

healthcare. Prospective students and graduates are drawn to Boston for these established collaborations, which enhance opportunities in these thriving sectors. Boston University's Medical Campus in the South End leads Boston higher education in NIH funding, but is followed closely behind by Harvard Medical School and Harvard School of Public Health.

TOP BOSTON HIGHER ED INSTITUTIONS BY NIH FUNDING

FY2024, in millions of dollars



Source: National Institutes of Health, "NIH Awards by Location and Organization," FY2024, City of Boston Planning Department Research Division Analysis.

PRIVATE SECTOR

Boston attracts innovative private companies that are at the forefront of medical advancements. These companies, fueled by NIH funding, are pioneering new treatments and technologies to address critical healthcare challenges. From antimicrobial drug discoveries to regenerative medicine and breakthrough therapies for neurological disorders, Boston's private sector plays a pivotal role in shaping the future of healthcare. Here are some of the top private recipients of NIH funding in FY2024:

- ExQor Technologies Inc., located in the West End, is a biotechnology company specializing in innovative treatments for neurodegenerative disorders. Their primary focus is on developing clathrin-based nanoparticles to deliver brain-derived neurotrophic factor (BDNF) directly to the hippocampus, aiming to prevent and treat early-stage Alzheimer's



disease. In FY2024, they received nearly \$1 million in funding from the NIH to support this research.¹¹

- DynamiCare Health, Inc., based in downtown Boston, is a digital therapeutics and telehealth company specializing in innovative treatments for substance use disorders. The company is conducting a decentralized clinical trial to evaluate its contingency management digital therapeutic for treating stimulant use disorder. Contingency management is an evidence-based approach that offers incentives to individuals in exchange for desired behavioral changes, and has been shown to be effective in treating stimulant use disorder.¹² DynamiCare's platform automates this approach by providing remote self-testing for substances and delivering financial incentives for negative test results. The trial aims to assess the feasibility and effectiveness of this digital therapeutic in promoting recovery among individuals with stimulant use disorder.¹³ DynamiCare was awarded a \$1 million grant from the NIH in FY2024.
- IT Bio, LLC, based in Chinatown near Tufts Medical Center, is a biotechnology company focused on developing innovative treatments for HIV. The company is working on a new type of immune cell therapy designed to fight HIV more effectively by preventing immune cells from becoming exhausted. Their approach uses a specially engineered version of anti-HIV chimeric antigen receptor T (CAR-T) cell therapy, a treatment method that has been successful in fighting certain cancers. With \$1 million in support from the NIH in FY2024, IT Bio is testing this therapy in preclinical studies to explore its potential for long-term HIV control.¹⁴

BOSTON: LEADER OF A REGIONAL POWERHOUSE

Boston continues to excel as a hub for biomedical research, with neighborhoods like the Longwood Medical Area and the West End playing a significant role in securing substantial NIH funding. In FY2024, the Fenway/Longwood area alone received an impressive \$1.4 billion in NIH funding, highlighting its prominence in the research landscape. Boston benefits greatly from its

¹¹ ExQor Technologies, Inc. <https://exqor.com/>

¹² DynamiCare Health, Inc. <https://www.dynamicarehealth.com/>

¹³ Hammond, A. S., Sweeney, M. M., Chikosi, T. U., & Stitzer, M. L. (2021). Digital delivery of a contingency management intervention for substance use disorder: A feasibility study with DynamiCare Health. *Journal of substance abuse treatment*, 126, 108425. <https://doi.org/10.1016/j.jsat.2021.108425>

¹⁴ IT BIO, LLC. <https://itbiollc.com/>

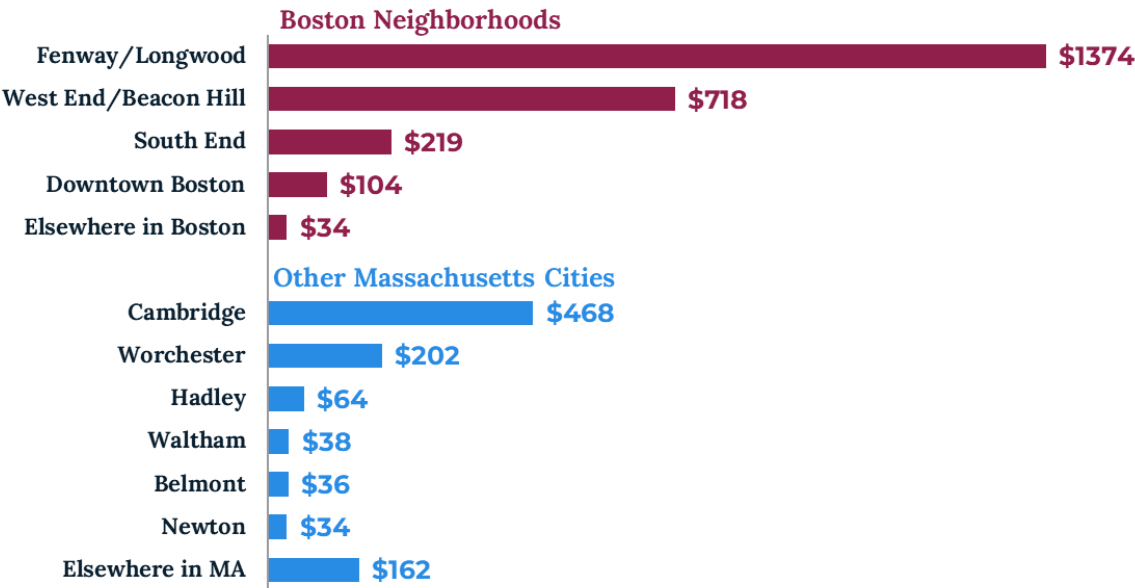


collaborations with renowned institutions in neighboring cities and towns across eastern Massachusetts. Cambridge, notably home to Harvard University and MIT, hosts premier research centers. In FY2024, Cambridge-based institutions secured 600 NIH awards totaling \$468 million in funding. A prominent example of this collaboration is the Broad Institute, which unites researchers from Harvard, MIT, and five affiliated hospitals in Boston.¹⁵

Massachusetts as a whole received nearly \$3.5 billion in NIH funding in FY2024, distributed across 5,776 awards. This remarkable funding, at \$492 per capita—more than four times the national average—solidifies Boston's status as a regional powerhouse in life sciences research and development.

NIH FUNDING BY BOSTON NEIGHBORHOOD AND MA CITY

FY2024, in millions of dollars



Source: National Institutes of Health, "NIH Awards by Location and Organization," FY2024, City of Boston Planning Department Research Division Analysis.

CONCLUSION

In FY2024, NIH grants funded cutting-edge projects in Boston that could substantially improve healthcare. For example, several projects at Beth Israel Deaconess Medical Center studied the connection between aging and brain health, including the project titled *Molecular Mechanisms of*

¹⁵ Broad Institute, "About the Broad Institute," <https://www.broadinstitute.org/about-us>

Aging and Accelerated Aging in the Human Brain, as well as the project titled *Brain Vulnerability in Delirium and Alzheimer's Disease and Related Dementias: Intersection of Polygenic Risk and Inflammation*. Another project, *Prospective Validation of Neurophysiologic Outcome Prediction in Acute Brain Injury*, focuses on improving outcome predictions for patients with severe brain injuries.

NIH-funded research is also critical in addressing infectious diseases like COVID-19. At Massachusetts General Hospital, researchers are investigating Long COVID in children (*Defining Neutrophil Pathobiology in Pediatric Long COVID*), developing vaccines (*Double-Encapsulated mRNA Vaccine for COVID-19*), and examining the broader social impact of the pandemic (*Impact of the COVID-19 Pandemic on Safety Net Performance, Disparities, and Vulnerable Children*).

Cancer research remains a key focus of NIH funding. Some projects are developing new treatment strategies, such as *Using Patient-Derived Co-Culture Models of Breast Cancer to Develop New Treatment Strategies Targeting Succinate Signaling*. Meanwhile, others aim to improve existing medications and treatments for cancer, including *Enhancing the Efficacy of Docetaxel in Prostate Cancer* and *Precision microRNA Medicine in Cancer*.

NIH funding continues to play a crucial role in advancing medical research and innovation in Boston. With nearly \$2.5 billion in grants awarded to the city's hospitals, educational institutions, research institutes, and private companies in FY2024, these investments support critical discoveries that improve public health and drive economic growth. Boston's leadership in biomedical research is strengthened by its strong collaborations with institutions in Cambridge and across Massachusetts, positioning the region at the forefront of scientific breakthroughs. As NIH funding fuels progress in fields ranging from neurology to infectious diseases and cancer treatment, Boston remains a global hub for cutting-edge medical research.



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