No. 25-2230

UNITED STATES COURT OF APPEALS
FOR THE FIRST CIRCUIT

PRESIDENT AND FELLOWS OF HARVARD COLLEGE,
Plaintiff-Appellee,

v.

US DEPARTMENT OF HEALTH AND HUMAN SERVICES; NATIONAL INSTITUTES OF HEALTH; ROBERT F. KENNEDY, JR., IN THE OFFICIAL CAPACITY AS SECRETARY OF THE UNITED STATES DEPARTMENT OF HEALTH AND HUMAN SERVICES; US DEPARTMENT OF JUSTICE; TODD BLANCHE, IN THE OFFICIAL CAPACITY AS ACTING ATTORNEY GENERAL OF THE UNITED STATES; US DEPARTMENT OF EDUCATION; LINDA M. MCMAHON, IN THE OFFICIAL CAPACITY AS SECRETARY OF THE UNITED STATES DEPARTMENT OF EDUCATION; US GENERAL SERVICES ADMINISTRATION; EDWARD FORST, IN THE OFFICIAL CAPACITY AS ADMINISTRATOR OF THE UNITED STATES GENERAL SERVICES ADMINISTRATION; US DEPARTMENT OF ENERGY; CHRISTOPHER A. WRIGHT, IN THE OFFICIAL CAPACITY AS SECRETARY OF THE UNITED STATES DEPARTMENT OF ENERGY; US NATIONAL SCIENCE FOUNDATION; BRIAN STONE, IN THE OFFICIAL CAPACITY AS ACTING DIRECTOR OF THE UNITED STATES NATIONAL SCIENCE FOUNDATION; US DEPARTMENT OF DEFENSE; PETER B. HEGSETH, IN THE OFFICIAL CAPACITY AS SECRETARY OF THE UNITED STATES DEPARTMENT OF DEFENSE; NATIONAL AERONAUTICS AND SPACE ADMINISTRATION; JARED ISAACMAN, IN THE OFFICIAL CAPACITY AS ADMINISTRATOR OF THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION; US DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT; SCOTT TURNER, IN THE OFFICIAL CAPACITY AS SECRETARY OF HOUSING AND URBAN DEVELOPMENT; US DEPARTMENT OF AGRICULTURE; BROOKE L. ROLLINS, IN THE OFFICIAL CAPACITY AS SECRETARY OF AGRICULTURE,
Defendants-Appellants.

On Appeal from the United States District Court
for the District of Massachusetts, Case No. 1:25-cv-11048-ADB

BRIEF OF MASSACHUSETTS, CALIFORNIA, COLORADO, CONNECTICUT, DELAWARE, HAWAI'I, ILLINOIS, MAINE, MARYLAND, MICHIGAN, MINNESOTA, NEVADA, NEW JERSEY, NEW MEXICO, NEW YORK, OREGON, RHODE ISLAND, VERMONT, VIRGINIA, WASHINGTON, AND THE DISTRICT OF COLUMBIA AS *AMICI CURIAE* IN SUPPORT OF PLAINTIFF-APPELLEE AND AFFIRMANCE

August 10, 2026

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INTRODUCTION AND INTERESTS OF AMICI

Amici States Massachusetts, California, Colorado, Connecticut, Delaware, Hawai‘i, Illinois, Maine, Maryland, Michigan, Minnesota, Nevada, New Jersey, New Mexico, New York, Oregon, Rhode Island, Vermont, Virginia, Washington, and the District of Columbia ("Amici States") submit this brief to urge the Court to affirm the District Court's grant of summary judgment to the President and Fellows of Harvard College ("Harvard").[1] Amici States are each home to universities that, like Harvard, pursue research as a fundamental part of their mission. These research universities fuel the economies of the Amici States, including by creating jobs, spurring innovation, developing medicines and technologies that improve the lives of residents, and training the future workforce.

The District Court correctly held that the federal government acted unlawfully in freezing funds to Harvard. In granting Harvard a permanent injunction, the court specifically recognized the critical importance of Harvard's research to the public. Appellant Addendum A78-79.

The Amici States write to underscore the enormous public benefit of university research and the dire risks posed by federal attacks on such research. Harvard's contributions to Massachusetts are a prime example of the significant impact that research universities can have. Since its founding in 1636, Harvard has

[1] Amici States file this brief as of right pursuant to Fed. R. App. P. 29(a)(2).

been critical to Massachusetts's economy and to its flourishing. Recognizing the significance of the university to the new state and nation, John Adams enshrined support for Harvard in the Massachusetts Constitution in 1780. Mass. Const. pt. II, c. 5 § 2. Today, Harvard is one of Massachusetts's largest employers. It also directs billions of dollars to the Commonwealth's businesses and organizations and drives countless innovations in medicine and technology. In other Amici States, research universities play a similar key economic role.

Federal attacks on research, like the funding freeze imposed on Harvard here, can decimate the pipeline of future researchers, slow innovation, and damage the complex ecosystem of businesses that supports university research. The federal government's unlawful funding freeze at Harvard has caused devastating spillover effects to the Massachusetts economy. Asked how the cuts have affected science in the state, one Boston Children's Hospital researcher described it as a "generational loss of innovation, technology, and economic power."[2]

The Amici States ask this Court to affirm the District Court's grant of summary judgment to Harvard.

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[2] K. Lazar et al, *"My scientific career is essentially over." A brain drain imperils Massachusetts' biomedical future*, Boston Globe (Feb. 11, 2026), https://www.bostonglobe.com/2026/02/09/metro/massachusetts-nih-cuts-biotech-scientists/ ("Lazar 2026").

ARGUMENT

I. Research Universities are Essential to State Economies.

Research universities are linchpins of state economies, including as employers. Harvard, for example, spent over $2.7 billion on salaries, wages, and benefits for Massachusetts residents in fiscal year 2024.[3] Harvard is the fifth-largest employer of Massachusetts residents, directly employing 19,639 people in the Commonwealth.[4] Similarly, the University of California is the second-largest employer in California,[5] and the University of Washington is the fifth-largest employer in Washington.[6]

But the economic impact of research universities on Amici States extends far beyond employment. Universities that calculate overall economic impact within their states routinely report figures in the billions: for example, $82.1 billion by the

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[3] Harvard Univ., *Facts and Impact: Harvard in Massachusetts 2024-2025*, at 6, https://www.harvard.edu/community/wp-content/uploads/sites/14/2025/10/Harvard-in-Massachusetts-Facts-Impact-2024-2025.pdf (*"Harvard Facts and Impacts"*).

[4] *Id.,* at 6.

[5] Univ. of Cal., *Impact*, https://www.universityofcalifornia.edu/impact (last visited July 21, 2026).

[6] Parker Strategy Grp., *The Economic Contribution of the University of Washington to the Statewide, Local, and National Economies* at 2 (Oct. 1, 2024), https://facilities.uw.edu/files/media/psg-uw-economic-impact-report-2024.pdf (*"U. Washington Contribution"*).

University of California in 2018-2019[7]; $9.4 billion by Oregon Health and Science University in 2024[8]; $20.9 billion by the University of Washington in 2023[9]; $24.9 billion by the University of Illinois in fiscal year 2023, representing 2.6% of state GDP[10]; $13.3 billion by Rutgers University in 2025[11]; and $11.5 billion by the University of Minnesota in 2024[12].

Research universities pour money into local economies through their own spending as well as the spending they generate. Harvard spent $1.6 billion at Massachusetts-based businesses on construction, supplies, and services in fiscal

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[7] Beacon Econ., *The University of California: Systemwide Economic, Fiscal, and Social Impact Analysis* (Jan. 2021), https://universityofcalifornia.edu/sites/default/files/economic-impact-report-2021.pdf (*"University of California Impact*").

[8] Or. Health and Science Univ., *OHSU's Economic Impact, 2024*, https://www.ohsu.edu/sites/default/files/2025-12/economic-impact-2024-one-sheet-summary-2025.11.18-fnl.pdf; Pinnacle Economics, Inc., *The Economic and Fiscal Impacts of Oregon Health and Science University, 2019*, at 3 (Nov. 2020), https://www.ohsu.edu/sites/default/files/2021-04/OHSU%27s%20Economic%20Impact%20on%20Oregon.pdf.

[9] *U. Washington Contribution*, at 2.

[10] Lightcast*, Analysis of the Economic Impact and Return on Investment of Education: The Economic Value of the University of Illinois System* at 6 (June 2025), https://economicimpact25.uillinois.edu/wp-content/uploads/2025/07/UISystem_MainReport_FY23.pdf (*"U. Illinois Report"*).

[11] Rutgers Univ., *Economic Impact*, https://www.rutgers.edu/economic-impact (last visited July 21, 2026) ("Rutgers Economic Impact").

[12] Tripp Umbach, *University of Minnesota Economic and Community Impact Report* at 8 (April 2025), https://government-relations.umn.edu/sites/government-relations.umn.edu/files/2025-04/UMN%20E%26CI%20Report.pdf (*"U. Minnesota Report"*).

year 2024.[13] And as the oldest university in the country, Harvard is one of the top tourist destinations in the Commonwealth, drawing 650,000 visitors to its museums each year.[14] Visitors to Harvard, as well as Harvard's employees and students, support local restaurants and businesses throughout Cambridge and the broader Boston region.[15] In Massachusetts more broadly, university visitors contribute an estimated $297 million in annual spending to the state economy.[16]

But much of research universities' massive economic impact stems, both directly and indirectly, from research activity. In fiscal year 2024, Harvard directed $372 million of research funding to salaries for researchers and staff.[17] In 2024-2025, Harvard spent $80 million of research dollars to purchase goods and services from businesses and organizations in Massachusetts.[18] In 2023, the University of Illinois System spent $609.8 million on payroll and $413.7 million in other

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[13] *Harvard Facts and Impacts*, *supra* n. 3, at 7.
[14] *Id.*
[15] *See, e.g.*, ESI EConsult Solutions, Inc., *Anchored in Excellence: How Massachusetts' Education and Healthcare Institutions Drive Regional Growth* (Oct. 8, 2025) at 28, https://bostonchamber.com/wp-content/uploads/2025/10/Greater-Boston-Chamber-of-Commerce-Eds-and-Meds-Report.pdf ("*Boston Chamber of Commerce Report*"); *Harvard Facts and Impacts*, at 7; *see also* D. Kohli, *Why a Weaker Harvard Would Mean a Weaker Massachusetts*, Boston Globe (May 12, 2025), https://www.bostonglobe.com/2025/05/12/business/harvard-massachusetts-economy-trump ("Kohli 2025").
[16] *Boston Chamber of Commerce Report*, at 29.
[17] *Harvard Facts and Impacts*, *supra* n. 3, at 4.
[18] *Id.*

expenditures to support research activities, generating an estimated $1.2 billion in added income for the Illinois economy.[19] Research spending at the University of Nevada, Reno added $164.3 million to the Nevada economy in fiscal year 2023.[20] Princeton University reports $230.9 million of spending by the Princeton Plasma Physics Laboratory and $579.9 million in other research expenditures across the university in fiscal year 2025.[21] Rutgers spent $1.1 billion dollars at New Jersey businesses in fiscal year 2025.[22] Research spending by independent colleges and universities in New York State is estimated to have created 19,000 off-campus jobs in fiscal year 2022-2023.[23] The University of Washington estimated that its research generated $2.6 billion for the Washington state economy in fiscal year 2023.[24]

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[19] *U. of Illinois Report*, *supra* n. 10, at 7.
[20] Lightcast, *The Economic Value of the University of Nevada, Reno, on Nevada* (Jan. 31, 2025), https://issuu.com/nevada-wolf-pack/docs/the_economic_value_of_the_university_of_nevada_re. ("*UNR Economic Value*"); *see also* Univ. of Nev., Reno, *Research and Innovation,* https://www.unr.edu/research-innovation (last visited July 21, 2026) ("*UNR Research and Innovation*").
[21] Princeton Univ., Office of the Dean for Research, *Research Projects and Funding* (April 14, 2026), https://research.princeton.edu/research-princeton/metrics-and-impact/research-projects-and-funding.
[22] *Rutgers Economic Impact*, *supra,* n. 11.
[23] Comm'n on Indep. Colleges and Univs. in N.Y., *Economic Impact of New York's Independent Sector, Fiscal Year 2022-23*, https://www.cicu.org/wp-content/uploads/2024/11/Economic-Impact-of-New-York-States-Independent-Sector-FY2022-23.pdf.
[24] Univ. of Washington, *Research Impact*, https://research.washington.edu/research-impact/ (last visited July 21, 2026).

Research at universities also drives innovation. As of July 2024, Harvard had over 900 active technology licenses with 650 industry partners across the country.[25] In fiscal year 2024 alone, Harvard reported 402 new innovations and filed for 170 new patent applications.[26] Harvard's Innovation Labs, a university hub for innovation and entrepreneurship, has catalyzed over 6,000 ventures.[27] Seventy-two life sciences start-ups have been launched through the Pagliuca Harvard Life Lab, which provides infrastructure for high-potential biotech and life sciences ventures; 90 percent of these start-ups are based in Massachusetts.[28] Massachusetts companies have also been built around, for example, Harvard discoveries in robotics and photonics.[29]

Other research universities have similar catalyzing effects. In California, University of California campuses create industrial parks and innovation spaces that support job creation, serve as incubators for startups, and attract businesses.[30] Over 1,400 startup companies—85 percent of which were based in California as of

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[25] *Harvard Facts and Impacts*, *supra* n. 3, at 5.
[26] *Id.*
[27] *Id.*
[28] *Id.*
[29] *Id.* (referencing photonics company, Hyperlight, among others).
[30] Univ. of Cal., *Accountability Report 2023: Executive Summary*, at 2, https://accountability.universityofcalifornia.edu/2023/2023-acct-exec-summ.pdf.

2016—have been founded around University of California inventions.[31] Research at the University of Minnesota has led to 260 start-ups and has supported farmers, agribusinesses, and rural economies by helping Minnesota remain at the forefront of agricultural innovation.[32] In fiscal year 2023, start-up and spin-off companies related to the University of Illinois System added $511.3 million in income to the Illinois economy.[33] In fiscal years 2015 and 2016, research at Rutgers University in New Jersey led to 352 disclosed inventions, 309 patents, 182 license agreements, and 119 start-ups.[34]

University research also provides work-force development for the next generation of scientists and entrepreneurs.[35] At universities, early-career workers gain the education, skills, and experience they need to thrive in complex fields.[36]

Research contributes to state economies in less obvious ways as well, such as by creating markets for equipment and other supplies.[37] A recent report by the

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[31] Univ. of Cal., *Annual Accountability Report 2022*, at 159 https://accountability.universityofcalifornia.edu/2022/documents/pdfs/2022-chapter-09.pdf.
[32] *U. Minnesota Report*, *supra* n. 12, at 6.
[33] *U. of Illinois Report*, *supra* n. 10, at 7.
[34] Rutgers Univ., *Rutgers Grows the Garden State: Our Impact on the Economy of New Jersey* (May 2017), at 12, https://governmentrelations.rutgers.edu/sites/default/files/2022-04/rutgers-economic-impact-single-pagesR.pdf.
[35] *Boston Chamber of Commerce Report*, at 50.
[36] *Id*. at 52-53.
[37] Kohli 2025, *supra* n. 15.

Donahue Institute at the University of Massachusetts calculated that the Massachusetts research and development ecosystem creates tens of thousands of jobs in industries that are typically not thought of when considering the research economy, including in the administration and support services sector, real estate and construction, food services, bars, and restaurants, ambulatory healthcare services, and social assistance.[38]

Amici States—and the nation as a whole—also benefit from the legions of lifesaving medical treatments and solutions to other complex problems developed by research universities. Harvard's research alone has produced countless new treatments for disease, including a revolutionary treatment for obesity,[39] cutting-edge cancer immunotherapy treatments,[40] and innovations in organ

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[38] Univ. Mass. Amherst, Donahue Inst., *The Research and Development Eco-System: Engine of the Massachusetts Economy* at 22 (March 2026), https://donahue.umass.edu/our-publications/the-research-and-development-ecosystem-engine-of-the-massachusetts-economy ("Donahue Inst. Report").

[39] Harvard Med. Sch., *Harvard Medical School Researcher Wins 2024 Lasker Award for Work That Led to GLP-1 Therapies* (Sept. 19, 2024), https://hms.harvard.edu/news/harvard-medical-school-researcher-wins-2024-lasker-award-work-led-glp-1-therapies.

[40] R. Groleau, Harvard Med. Sch., *Medicines That Unleash the Immune System To Fight Cancer* (July 7, 2025), https://hms.harvard.edu/news-events/multimedia/medicines-unleash-immune-system-fight-cancer; E. Pesheva, *To Boost Cancer Immunotherapy's Fighting Power, Look to the Gut*, Harvard Med. Sch. (May 3, 2023), https://hms.harvard.edu/news/boost-cancer-immunotherapys-fighting-power-look-gut.

transplantation.[41] Many of California's leading industries grew from University of California research, including biotechnology, computing, semiconductors, telecommunications, and agriculture.[42] At the University of Minnesota, research is leading to the development of drought-resistant crops, sustainable farming, and renewable energy solutions.[43] Research at Princeton University in New Jersey produced a transformational lung cancer drug.[44] Any attempt to catalog innovations developed through university research would fill innumerable pages, but the fact that such research improves and lengthens the lives of Amici State residents is indisputable.

Many of these inventions stem from basic scientific research that would be too risky or expensive for private industry to undertake.[45] Basic research into the workings of the gastrointestinal tract at Harvard led to the discovery of GLP-1

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[41] Harvard Med. Sch., *In a First, Genetically Edited Pig Kidney Is Transplanted Into Human* (Mar. 21, 2024), https://hms.harvard.edu/news/first-genetically-edited-pig-kidney-transplanted-human.
[42] *University of California Impact*, *supra* n. 7, at 64.
[43] *U. Minnesota Report*, *supra* n. 12, at 6.
[44] L. Fuller-Wright, *The Partnership That Drives America's Leadership in Medical Discovery: How It Works and What's at Stake*, Princeton Univ. (Feb. 18, 2025), https://www.princeton.edu/news/2025/02/18/partnership-drives-americas-leadership-medical-discovery-how-it-works-and-whats.
[45] *Donahue Inst. Report, supra n.* 38, at 14; M. Ostertag, Information Technology and Innovation Foundation, *How Reducing Federal R&D Reduces GDP Growth* at 5 (Sept. 2025), https://itif.org/publications/2025/09/15/how-reducing-federal-rd-reduces-gdp-growth/.

drugs which are transforming care for diabetes and obesity.[46] Likewise, research at Harvard into the ways that red blood cells make hemoglobin led to the identification of a gene that could be edited to treat or even cure sickle cell disease.[47] As the President of the Massachusetts Institute of Technology recently explained, "[i]mmunotherapies are possible today only because thousands of scientists, for more than 40 years, followed their curiosity to probe the immune system's deep processes. CRISPR [gene editing] therapies came from scientists determined to understand how bacteria defend themselves from viruses — not from a directed effort to save babies with grave mutations."[48] The early research taking place at research universities creates new fields of inquiry and opens up new sectors for industry.

Finally, residents of Amici States benefit from initiatives led by research universities with state and local partners to address local issues and educate community residents. Harvard, for example, leads workforce training and education programs for the Greater Boston and Massachusetts communities, funds

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[46] C. Caruso, *Tracing the Path from Basic Research to Transformative Therapies, Harvard Magazine* (April 2025), https://magazine.hms.harvard.edu/articles/tracing-path-basic-research-transformative-therapies.

[47] *Id*.

[48] S. Kornbluth, *America built the world's greatest research engine. Now it's shrinking*, Boston Globe (May 26, 2026), https://www.bostonglobe.com/2026/05/26/opinion/science-funding-cuts-mit/.

nonprofits, partners to build affordable housing, and provides its expertise to local governments across the Commonwealth.[49] Harvard recently partnered with the governor of Massachusetts and other local research universities to launch a Massachusetts AI Hub that will ensure the state's workforce is prepared and trained for the future of AI-driven work.[50] Researchers at the University of Illinois partner with local farmers and robotic technology to support crop production, while teaching students robotics, soil science, and coding.[51] Research universities in other Amici States support food pantries, access to medicine for rural and other underserved communities, workforce development trainings, preservation of natural resources, and countless other initiatives that benefit state economies.[52]

II. Attacks on Research Universities Have Devastating Impacts on Amici States.

Funding freezes like the one at issue here cause massive downstream consequences for Amici States.

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[49] *Harvard Facts and Impacts*, *supra* n. 3, at 7, 10-11; Harvard Univ., *Harvard University's Community Benefits in Allston-Brighton: Annual Report*, 2024-2025, https://www.harvard.edu/community/wp-content/uploads/sites/14/2025/09/annual_report_24_25_final-9-12-25_492e6f.pdf.
[50] *Harvard Facts and Impacts*, *supra* n. 3, at 4.
[51] *U. Illinois Report*, *supra* n 10, at 20.
[52] *See*, *e.g.*, *UNR Economic Value*, *supra* n. 20, 15, 22-23, 43, 45; *see also* Cal. St. U., *Water Research,* https://www.calstate.edu/impact/Pages/research/water-research.aspx (last visited July 21, 2026).

First, such freezes decimate the training and opportunities available to the next generation of researchers. In many cases, federal funding pays the salaries of researchers and lab technicians. Without that funding, employees lose their jobs, or a university needs to pull funds (to the extent possible) from other parts of the university, diminishing its ability to complete its educational mission. Indeed, facing federal funding cuts, many universities have cut the number of spots available in doctoral programs,[53] impacting the pipeline of future researchers to advance science, industry, and public health. In the last year, Harvard announced that it would be cutting the number of PhDs in science in half, and has contemplated even larger cuts.[54] A recent *Boston Globe* survey of scientists who received federal funding reported that over two-thirds would recommend their students consider careers outside academia; the majority had delayed hiring and one-third had laid off workers.[55] Harvard researchers have recounted the heartbreaking effects of the federal administration's funding cuts on the early-career researchers in their labs. One breast-cancer researcher lost seven of her

[53] Lazar 2026, *supra*. n. 2; S. Svurluga, *Admissions to top PhD programs down 15% amid federal funding cuts, uncertainty*, Washington Post (July 6, 2026), https://www.washingtonpost.com/education/2026/07/06/admissions-top-phd-programs-down-15-amid-federal-funding-cuts-uncertainty/.
[54] W. C. Mao and V. H. Paulus, *Harvard To Admit 50% Fewer Ph.D. Students in Science, Walking Back Deeper Cuts*, Harvard Crimson (Nov.19, 2025), https://www.thecrimson.com/article/2025/11/19/fas-science-phds/.
[55] Lazar 2026, *supra* n. 2.

eighteen lab employees following the initial cuts.[56] One PhD student at Harvard Medical School recounted questioning whether her dream of working as an academic scientist would still be possible, as postdoctoral research positions that she would otherwise have applied for were eliminated following the funding cuts.[57] Another PhD student described this generation of scientists as "the lost generation."[58]

Second, funding freezes risk a "brain drain," whereby the most talented researchers are lured away from American research universities to institutions in countries where funding streams are more stable. A 2025 survey by the scientific journal *Nature* found that 75 percent of the scientists surveyed were contemplating moving abroad to continue their research because of funding disruptions.[59] By 2026, a *Boston Globe* survey found that more than one in six researchers in Massachusetts had experienced the loss of staff members to foreign research institutions.[60] Some countries have seized the opportunity to recruit promising

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[56] M. Bebinger, *After NIH grant cuts, breast cancer research at Harvard slowed, and lab workers left*, NPR (Dec. 9, 2025), https://www.npr.org/sections/shots-health-news/2025/12/09/nx-s1-5630892/nih-nci-breast-cancer-research-harvard-joan-brugge.
[57] S. Svrluga, *At Harvard, Trump administration cuts hit young scientists hard* (Aug. 24, 2025), https://www.washingtonpost.com/education/2025/08/24/harvard-grad-students-research-cuts/.
[58] *Id*.
[59] A. Witze, *75% of U.S. Scientists Who Answered Nature Poll Consider Leaving*, Nature (March 27, 2025), https://www.nature.com/articles/d41586-025-00938-y.
[60] Lazar 2026, *supra*, n. 2.

scientists by expanding visa programs or enticing researchers to "Choose Europe for Science" through well-funded programs.[61] The journal *Nature* has reported that dozens of researchers moved to France following such a recruitment effort – many of these researchers came from a research university (Columbia) that had funds frozen by the federal administration.[62] The economies of Amici States are being significantly harmed by the loss of top scientific talent and the resulting loss of competitive advantage in key subject areas such as artificial intelligence, biomedical industries, and defense research.

Third, loss of research funding stymies the innovation sector in Amici States by slowing intellectual property development, leading to fewer new companies founded in Amici States. In Massachusetts, biotechnology entrepreneurs have described federal funding as critical to the launch of their companies, which frequently license technology developed at universities and rely on the universities for a skilled workforce.[63]

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[61] *Donahue Inst. Report*, *supra* n. 38, page 43.
[62] E. Gibney & M. Koslov, *Dozens of researchers will move to France from US following high-profile bid to lure talent*, Nature (Feb. 2026), https://www.nature.com/articles/d41586-026-00405-2.
[63] K. Putzier & C. Deng, *Boston at Risk of Wealth Spiral as Harvard Fight Ripples Through Economy*, Wall Street Journal (Apr. 20, 2025), https://www.wsj.com/us-news/education/harvard-funding-wealth-boston-448df045?msockid=24a2eeb9609c63b81458f8b0618e6259.

Fourth, a funding freeze impacts the vast ecosystem of businesses in Amici States that support university operations, and their neighboring communities. Local life-sciences companies that supply research materials describe the Massachusetts economy as hinging on the strength of the biotechnology industry, in which Harvard is a central player.[64] Notably, shares for certain Massachusetts companies that supply research materials to academic institutions plummeted after the initial research cuts at Harvard.[65] A California company that supplies scientists with benchside tools, like microfluidic chips, reagents and slides, laid off approximately 8 percent of its workforce because of research funding cuts impacting its academic and government customers.[66] Scientists whose funding was cut describe delaying or cancelling purchases of lab materials and equipment.[67] An owner of a restaurant in Cambridge's Kendall Square, whose business was down 5 to 8 percent last year, notes: "When you're counting on funding from the National Institute of Health,

[64] Kohli 2025, *supra* n. 15.
[65] *Id*.
[66] R. Leuty, *'Shooting ourselves in the foot': Trump administration cuts force East Bay's 10x Genomics into layoffs*, San Francisco Business Times (May 16, 2025), https://www.bizjournals.com/sanfrancisco/news/2025/05/16/trump-layoffs-research-funding-10x-genomics-txg.html.
[67] M. T. Weir, *Harvard's Funds Are Back. Can Its Scientists Trust the Government Again?*, Harvard Crimson (Nov. 15, 2025), https://www.thecrimson.com/article/2025/11/12/harvard-trump-research-funding-cuts/

that stuff trickles down to the whole ecosystem of life sciences," including the restaurants that feed the scientists.[68]

Fifth, a funding freeze can cause a research university to pause or decrease its collaborations with state and local partners on regional initiatives that fuel spending. After the federal government's funding freeze, Harvard made clear that it may have to "reduce, delay, or eliminate much of this activity" because of the federal government's actions. JA094 ¶ 102. Neighbors in Cambridge and Allston have described Harvard as a "true community partner" in recent years, and warned of the significant local impact if funding cuts force Harvard to cut back on its long-term collaborations with the community to develop surrounding neighborhoods.[69]

Sixth, attacks on research universities could prevent the next lifesaving treatments or other transformational innovations from being developed. Renowned scientists with proven track records for groundbreaking research have had to abruptly abandon lines of inquiry due to funding cuts.[70] At Harvard, the federal government abruptly terminated funding for multi-year advanced research studies

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[68] Lazar 2026, *supra*, n. 2.
[69] Kohli 2025, *supra* n. 15.
[70] S. Svrluga, *MIT president blames federal policy shifts for big drop in research on campus*, Washington Post (May 15, 2026), https://www.washingtonpost.com/education/2026/05/15/mit-president-blames-federal-policy-shifts-big-drop-research-campus/; A. Chen, *His lab was humming with discovery. After one year under Trump, it's almost silent*, STAT (Dec. 5, 2025), https://www.statnews.com/2025/12/05/research-cut-impacts-john-quackebush-profile-american-science-shattered-series/.

into, for example, radiation exposure[71], ALS,[72] antibiotic resistant bacteria,[73] and breast cancer.[74] When long-term scientific studies are stopped midway, their partial results often lose validity, wasting the valuable resources already expended and delaying scientific progress.[75] It is no exaggeration to say that attacks on research universities could lead directly to significant loss of life in Amici States and beyond.[76]

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[71] L. Mineo, *Freezing Funding Halts Medical, Engineering, and Scientific Research*, Harvard Gazette (Apr. 21, 2025), https://news.harvard.edu/gazette/story/2025/04/freezing-funding-halts-medical-engineering-and-scientific-research/ ("Mineo").

[72] S. Sundar, *Scores of Researchers Receive Termination Notices After Federal Government Cuts, Most Grants to Harvard*, Harvard Crimson (May 17, 2025), https://www.thecrimson.com/article/2025/5/17/research-termination-notices; C. Serres & K. Lazar, *'A Bloodbath': Trump Administration Moves to Terminate Hundreds of Federal Grants at Harvard*, Boston Globe (May 17, 2025), https://www.bostonglobe.com/2025/05/16/metro/harvard-trump-administration-grant-terminations/.

[73] M. Bebinger, *Feds Yank Funds from Harvard Breast Cancer, Fertility, Antibiotics Research*, WBUR (May 20, 2025), https://www.wbur.org/news/2025/05/16/harvard-medical-research-trump-2-7-billion-cuts.

[74] *Id*.

[75] *See*, *e.g.*, Mineo, *supra* n. 71; *see also* S. Bajaj, *How a Funding Pause Derailed an Artificial Heart for Babies*, N.Y. Times (May 18, 2026), https://www.nytimes.com/2026/05/18/well/federal-cuts-artificial-baby-heart-cornell.html.

[76] *See*, *e.g.*, D. Fuller & P. Mitchell, *Cuts to Science Research Funding Cut American Lives Short*, Ohio Capital Journal (Mar. 31, 2025), https://ohiocapitaljournal.com/2025/03/31/cuts-to-science-research-funding-cut-american-lives-short/.

CONCLUSION

For the foregoing reasons, Amici States respectfully request that this Court affirm the District Court's grant of Harvard's motion for summary judgment.

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I hereby certify that on August 10, 2026, I electronically filed this brief with the United States Court of Appeals for the First Circuit by using the CM/ECF system. I certify that all counsel for all parties in this case are registered as ECF Filers and that they will be served electronically by the CM/ECF system:

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