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# Empire Biomedical Research Institute (EBRI)

## EXECUTIVE SUMMARY

Biomedical research is a critical driver of New York State's economy, employing a globally competitive scientific workforce that generates the discoveries and innovations that are foundational to our life sciences economy. Basic science research furthers our understanding of how to prevent, treat and diagnose disease, and clinical and translational research advance our healthcare. In the next decade, this research is poised to bring to market and deliver to patients transformative AI diagnostics, new drugs for dementia and neurodegenerative diseases, cancers, and childhood diseases, and bioengineered devices and therapies to treat diabetes, heart disease, and immune disorders – diseases that affect New York State residents, families and communities.

Research is a key driver of downstream healthcare cost savings; development of less expensive but more effective interventions to more accurately prevent, treat, and eliminate disease can dramatically reduce healthcare spending while improving health outcomes for all.

**Public investments in research deliver economic returns.**

- New York State is the second leading recipient of National Institutes of Health (NIH) funding, totaling nearly $3.6 billion in 2024 – 70% of which was awarded to scientists at our medical schools. Every dollar invested in research by the NIH produces an estimated $2.50 in economic activity.

**New York State's academic institutions and companies house a world-class scientific workforce.**

- 35,000 New Yorkers work in federally funded biomedical research. At our medical schools alone, more than 17,000 people are directly engaged in research, generating $8.3 billion in economic activity. Another 120,000 people are employed in our bioscience companies.

**Publicly funded research improves people's health and lives.**

- An estimated 99% of new therapies from 2010 to 2019 originated from publicly funded research, including treatments for cancers, cures for sickle cell and other genetic diseases, and treatments for common conditions such as osteoporosis, diabetes and heart disease.

Sustained federal investment in research has positioned the United States as the unrivaled global leader in science and has enabled New York State to develop critical infrastructure and grow our scientific workforce. **Our leadership, however, is jeopardized by the significant shifts in federal priorities that have created uncertainty for science and scientists and by increased competition from states like California, Massachusetts, and Texas that are investing billions in biomedical research.**

The Empire Biomedical Research Institute (EBRI), a bold new initiative proposed here, would empower New York State to capitalize on opportunities created by the shifting landscape of public research funding, expand our leadership, attract sizeable investment, grow our life sciences sector, and ensure our health systems' ability to deliver the very best care to all New Yorkers. **EBRI would launch a New York State funding mechanism to advance health and economic resilience by funding investigator-driven, peer-reviewed scientific research in key areas of public health significance, infrastructure development, and workforce training.**

EBRI would provide merit-based funding through targeted programs:

- Individual biomedical research projects in areas of medical need that affect New Yorkers across the state, including those in rural and urban areas.
- Public health innovations that speed discovery and care to New Yorkers and their communities.
- Technology development centers to ensure that New York remains a catalyst for innovation.
- Training programs to build a competitive scientific, clinical and technical workforce.
- Collaborations and partnerships across New York institutions to support the expansion of research programs with the ultimate goal of improved community health.

In the short term, EBRI would help New York State:

- Stabilize the biomedical research enterprise at our academic institutions.
- Capitalize on opportunities to recruit and retain scientists, laboratories, companies, and private investment in New York State.

In the long term, EBRI would:

- Galvanize New York State's global leadership in biomedicine.
- Strengthen collaborations and partnerships among our statewide network of academic research institutions and our life sciences sector.
- Enhance the development of our scientific workforce while accelerating the growth of New York's innovation economy.
- Ensure access to the highest quality healthcare through new technologies, treatments and cures for all New Yorkers, including populations of greatest need.

## THE CHANGING LANDSCAPE OF PUBLICLY FUNDED RESEARCH

For the past 80 years, sustained federal investment in research has positioned the United States as the unequivocal global leader in scientific discovery and innovation. The National Institutes of Health (NIH) and National Science Foundation (NSF) were established to harness the power of universities and academic medical centers to advance discoveries that improve lives and drive economic growth. Public investment has yielded breakthroughs that have transformed society and healthcare, including the sequencing of the human genome, imaging technologies, cancer therapies and gene editing.

### Biomedical Research in New York State

In New York, sustained federal investment has supported significant infrastructure and workforce expansion, making us a global leader in biomedical research and the life sciences. In recent decades, New York State has produced more medical breakthroughs than most countries. Nearly all of this foundational research is conducted at our medical schools and other nonprofit research institutions, and more than 90% is underwritten by federal research grants.

New York State is the second leading recipient of NIH funding, with nearly $3.6 billion in 2024, supporting more than 6,000 research projects. These NIH and NSF investments have transformed research infrastructure in the state – including our **eight Clinical and Translational Science Institutes, eight National Cancer Institute-designated cancer centers and the only Research Center in Minority Institutions in the northeast.** Much of this infrastructure is concentrated around our academic medical centers which, in turn, support regional innovation economies.

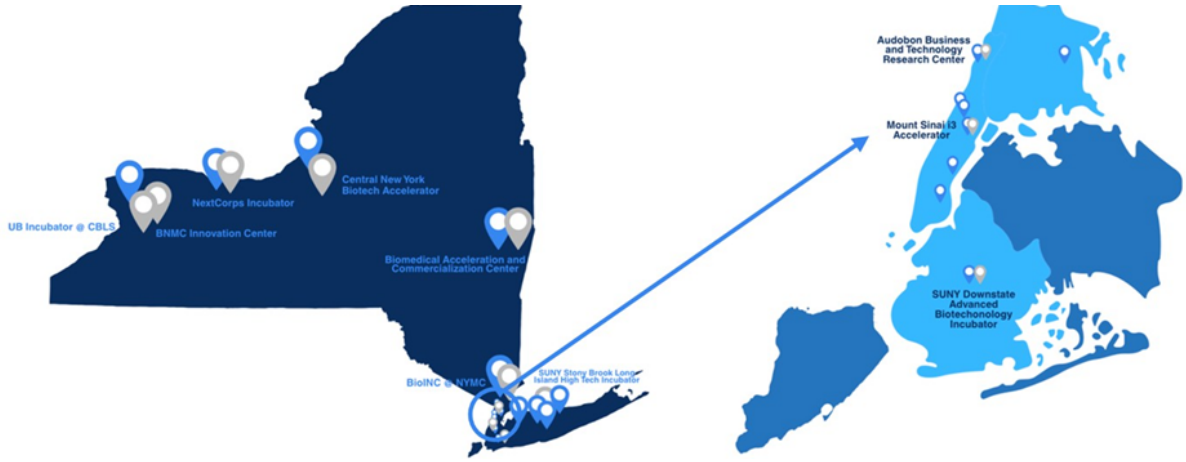


*Figure 1. Geographic distribution of New York's medical schools, incubators and accelerators.*

More than 35,000 New Yorkers are employed in biomedical research. At our medical schools alone, more than 17,000 people are directly engaged in research, with an employment multiplier of 2.35 (meaning that for every research job at our academic medical centers an additional 1.35 jobs are supported in the state economy) and generating $8.3 billion in economic activity.

Federal support, coupled with state and local investments, have likewise paid dividends in the private sector, with nearly 6,000 life sciences companies – a 20% growth over the past five years – attracting $3.6 billion in venture capital investment.[1] Our biopharmaceutical sector now employs more than 160,000 New Yorkers.

Recent shifts in federal priorities, however, have slowed research operations throughout the country. In the long term, this uncertainty indicates that diversifying funding beyond the federal government will be essential if we are to continue the pace of medical advancements. In the short term, this paradigm shift suggests new opportunities, and state governments and competitors around the world are launching new initiatives intended to recruit scientists and grow their innovation economies. While New York State has made important targeted investments in biomedical research, including our Centers of Excellence, Centers for Advanced Technology and the Life Sciences Initiative, our overall funding for biosciences has not kept pace with other states, leaving New York more reliant on federal funding and therefore more vulnerable to changes in federal priorities.

**Federal Policy Changes Have Slowed the Pace of Research**

Recent actions by the federal government have slowed funding and created uncertainty about the future of NIH and NSF funding priorities. Without meaningful and timely intervention, these changes may irreversibly harm the research enterprise in New York. In addition to the immediate effects on existing research programs, the termination of grants and proposed reductions in NIH and NSF funding have eroded the scientific community's confidence in the federal government as a stable partner. Predictability is essential to biomedical research to ensure the security of the multi-year funding and effort investments required to yield the results that lead to transformative treatments and cures.

- New York has been impacted more than any other state by the termination of NIH grants.[2]
- Grant reviews and awards have slowed to approximately 30% of prior year levels, resulting in a proportional loss of revenue to academic research programs.

[1] https://bio.widen.net/s/hxpbqhrpbv/new-york---the-u.s.-bioscience-economy---driving-economic-growth-and-opportunity-in-states-and-regions
[2] https://www.aamc.org/media/83996/download

**Our Scientific Workforce Relies on Predictable Funding Partners**

Our system of developing future scientists, who contribute to advancements in both academia and the private sector, has relied on its long-term partnership with the federal government. In the short term, reductions in federal funding will restrict career pathways open to graduate students, postdoctoral fellows, and early career bench and clinician scientists. In the long term, the brightest minds will be dissuaded from pursuing careers in science. A brain drain to other states—such as California, Massachusetts, and Texas—or to international research teams in Europe or China – poses a threat to New York's scientific workforce. Those states and regions making significant investments now will have competitive advantages in recruiting and retaining world-class scientific talent.

- With more medical schools than any other state, New York plays a vital role in national workforce development, training 1 in 7 doctors and 1 in 11 scientists in the US.
- Many PhD programs have recently cut admissions by 30 to 100%. This reduction in the scientific workforce will irreversibly damage productivity and economic growth.
- Existing and proposed cuts to federal research funding are spurring institutions in Europe[3] and China to capitalize on this opportunity and recruit researchers who are facing new resource and subject matter limitations as a result of federal actions.

**New Yorkers Benefit from Access to Emerging Treatments and Cures**

NIH-funded scientists at our academic institutions have for decades made significant breakthroughs in the leading causes of morbidity and mortality, including cancer, neurodegenerative disorders, heart disease and diabetes.

- 99% of FDA-approved therapies from 2010 to 2019 originated from publicly funded research.
- New York State currently hosts more than 4,400 active clinical trials – critical pipelines for new treatments.

The research-to-patient pipeline is integral to providing all New Yorkers access to the latest lifesaving technologies and improving health outcomes. Biomedical research is also a key driver of downstream healthcare cost savings through the development of less expensive, more effective interventions to more accurately prevent and treat disease.

**The Urgent Need for Bold State Investment**

**The future of biomedical research in New York depends on our willingness to invest in state-supported programs that advance scientific research at our medical schools, universities and nonprofit research institutes today.** Uncertainty about the scope and scale of future federal research funding will escalate the competition for federal funding and private investments. States with significant research investments and those rapidly innovating in this space are poised to gain an edge over other states and protect their life sciences sectors from global competitors.

Below are examples of work being done by other states and competitors to address these concerns.

**California**

For decades, California has supported its life sciences sector, providing seed and other funding to startup companies launching from its academic institutions. As a result, California has the most robust life sciences sector in the US, with more than 14,000 life sciences companies employing nearly 335,000 people in 2021 and $79 billion in venture capital investment from 2018-21.

[3] https://commission.europa.eu/topics/research-and-innovation/choose-europe_en

- The California Institute for Regenerative Medicine (CIRM), which supports stem cell science, launched with $3 billion in 2004 and voters approved an additional $5.5 billion in 2020. CIRM has recently focused much of its funding on translational science.
- In March 2025, the California state legislature introduced a bill to establish a $23 billion California Institute for Scientific Research. The bill would create a fund that would award grants and make loans to universities, institutes, companies and organizations to support scientific research in the state.[4] The aim of this institute is to fortify biomedical research in the state and further cement California as the US leader in the life sciences.

**Massachusetts**

Massachusetts has long been a global hub for biomedical innovation with a startup ecosystem that supports companies launching from academic institutions.

- The state created its $1.5 billion Massachusetts Life Sciences Center to drive basic research and grow its bioscience sector in 2006.
- In August 2025, Governor Healey announced a $400 million initiative to create a research funding pool and support direct and indirect costs associated with academic research.

**Pennsylvania**

In order to provide immediate support to Pennsylvania's nine medical schools and life sciences sector, Governor Shapiro's 2025-26 budget proposal includes $50 million for a new PA Innovation program, which includes a one-time $30 million initiative to spur life sciences job growth and $20 million for annual funding to support large-scale innovation. An additional $30 million is allocated for life sciences.

**Texas**

Texas has made substantial investments in research over the past two decades, with a primary focus on cancer, and is now expanding to include research on neurodegenerative diseases. A recent report indicated that every dollar invested in the Cancer Prevention Research Initiative of Texas (CPRIT) returns more than $200 in economic activity.[5]

- CPRIT launched in 2007 with an initial $3 billion investment over 10 years. Building on the first decade of success, Texas voters authorized a second $3 billion investment in CPRIT in 2019. CPRIT is now the second largest public funder of cancer research in the US, following only the National Cancer Institute. Over the last 15 years, CPRIT has awarded $854 million to Texas institutions specifically to recruit out-of-state scientists through their CPRIT Scholar and Recruitment of Rising Stars (RRS) programs which have included successful recruitments from New York.
- Modeled after CPRIT, Texas launched in May 2025 a new $3 billion Dementia Prevention Research Initiative of Texas (DPRIT), which will be put to voters on the November 2025 ballot.[6]

**Global Competitors**

As the US adjusts to federal policy shifts, academic institutions outside the US – notably in Europe and China – have launched new initiatives to recruit scientists from our institutions.

[4] https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202520260SB829
[5] https://2024annualreport.cprit.texas.gov/cost-of-cancer/
[6] https://www.tmc.edu/ecosystem/dprit/

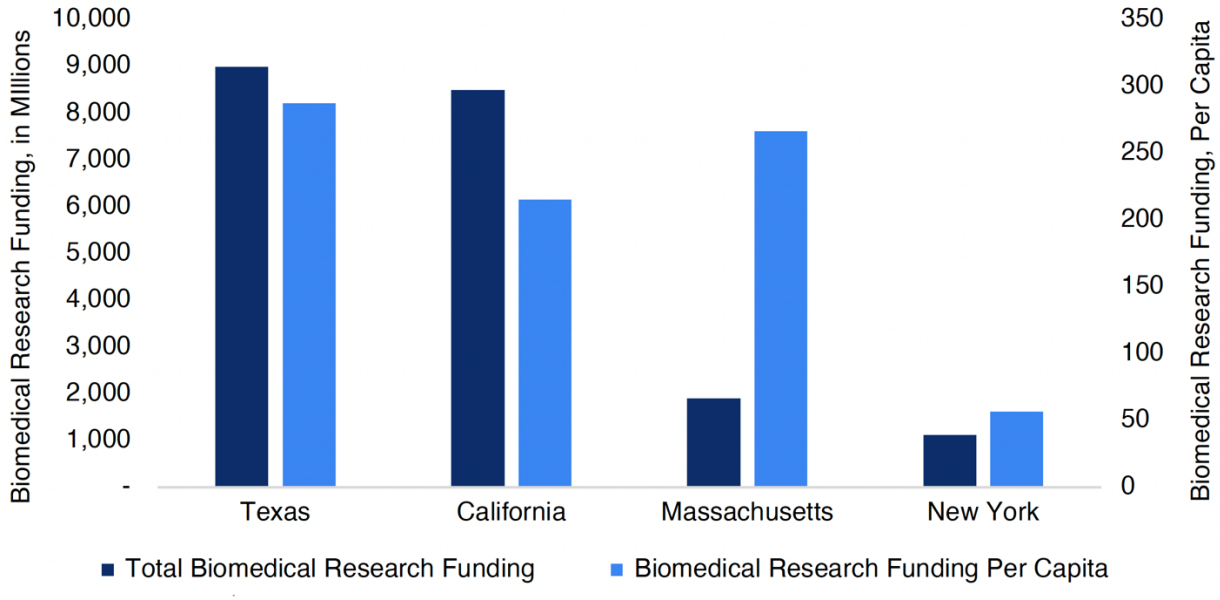


*Figure 2. Major State Biomedical Research Funding Initiatives, 2005 – Present.*

**New York State Investment in Empire Biomedical Research Institute**

Long-term funding stability that protects against the vagaries of federal funding and is of a scale to compete with other states and global competitors is essential. Our recommendations for both short-term and long-term approaches to do so are as follows:

- Short-term recommendation: $500 million to stabilize current research programs, establish EBRI and capitalize on opportunities to recruit and retain scientists.
- Long-term recommendation: $6 billion over 10 years to advance New York State's global leadership in biomedicine and ensure access to the highest quality healthcare through new technologies, treatments and cures for all New Yorkers.

**EBRI FUNDING**

Research that has transformed our health and economy has historically been built around three key mechanisms: individual scientist-driven projects, the availability of established and new technologies to scientists, and collaborative research efforts among groups of researchers, enabling work that exceeds the capabilities of any single laboratory. Core elements of EBRI funding should include:

- Individual investigator-initiated awards: NIH R01-type funding and pilot and feasibility grants.
- Evolving infrastructure: to support scientists from around the state in identifying new technologies and invest in making new technologies available.
- Collaborative research program partnerships across institutions: to facilitate larger projects leveraging New York's breadth of expertise.
- Training programs: to support graduate students, PhD, MD/PhD, RN/PhD, and DPH, post-doctoral/research fellows, and clinician scientists.

## EBRI REVIEW

The EBRI review and governance model has an opportunity to draw upon and improve more than seven decades of national and institutional learning in the organization of public science and reinforce core principles from the founding of the NIH and NSF that scientific research supported by public funds must be:

- Stable in its funding to enable long-term scientific inquiry.
- Guided by expert, independent oversight.
- Conducted outside of direct government operation.
- Protected in institutional autonomy and academic freedom.
- Transparent and accountable.

These foundational principles will form the ethical and operational backbone of EBRI. They affirm that public investment in science must be enduring, fair, insulated from short-term policy decisions and guided by those who understand science and aligned to improve health outcomes for all New Yorkers.

## EBRI GOVERNANCE

A three-tier governance structure will (1) supply sound, responsive management through a Board of Directors and its employed officers and staff, (2) choose among well-reviewed applications according to the judgments of a Scientific Advisory Board, and (3) evaluate individual proposals with the help of Application Review Groups.

### Board of Directors

- Recruits the Scientific Advisory Board (SAB).
- Awards grants based on recommendations of the SAB, within budget and in the light of additional considerations as appropriate.
- Identifies resource needs for shared state-wide core facilities.
- Prepares and submits annual scientific and financial reports.
- Keeps the public informed and engaged.

### Scientific Advisory Board

- Establishes an application cycle, its deadlines and application formats for individual, team and training grant applications.
- Issues Requests for Applications (RFAs). Identifies areas of greatest medical need for New Yorkers and focuses RFAs to respond to those needs.
- Recommends composition of Application Review Groups (ARGs).
- Develops a scoring system for ARGs.
- Refers top-ranked applications to the Board of Directors for funding.
- Reviews final progress reports.

### Application Review Groups (ARGs)

- Reviews and scores grant applications.
- Reviews progress reports for multiyear grants and advises SAB on annual renewal.

## EBRI ENHANCES CURRENT NEW YORK STATE INITIATIVES

EBRI would advance the health of New Yorkers by ensuring that the discovery and advancement of the most innovative treatments in medicine are developed in New York and are made available to all patients through New York-based healthcare providers. EBRI would build on existing state-funded programs that serve as New York's cornerstones of medical research investment.

- Recognizing the power of artificial intelligence and the need for New York's research community to access this technology, New York State launched a $250 million investment in 2024 with the establishment of **Empire AI**. New York State collaborates with research partners through Empire AI who are bringing their expertise to ensure both the long-term success of the initiative and the maximization of the technology's potential to serve critical societal challenges. EBRI is squarely focused on one such challenge: human health. Consequently, EBRI will also access the Empire AI resources to accelerate the development of clinical therapies. The technology developed and supported by Empire AI will allow researchers to compare the efficacy of different treatments in a much more accurate and timely manner than has been done for decades previously.

- The Empire State Development **Life Science Initiative** (LSI), launched in 2017, brings more than $600 million in funding and tax credits to the life sciences industry through investments in innovative projects such as the Lab of the Future, the Cell and Gene Therapy Initiative and the Chan Zuckerberg Biohub. In combination with the investments already made through the LSI, these projects have New York State poised to overtake other states in creating the most successful and economically impactful life sciences infrastructure in the country. The discoveries enabled by EBRI will flow through and into these projects via LSI's academic and private sector partners.

- In building a robust life sciences industry, New York is also competing with other states for the top talent in biomedical research. LSI's **NYFIRST** program, which funds the recruitment and retention of top scientists at New York's medical schools, began in 2018 and in its first five funding rounds it has helped attract star scientists to New York from across the country. While NYFIRST has enabled these recruitments, EBRI will ensure the continuity of their research.

- New York is a recognized leader in the development of innovative treatments for spinal cord injury due largely to the creation of the **Spinal Cord Injury Research Program** (SCIRP) in 1999. SCIRP presents a prime example of how EBRI will innovate New York State's research enterprise, while simultaneously building upon existing program infrastructure.

## CONCLUSION

The translational research enterprise across New York State is at an inflection point. If we fail to take meaningful action, we risk the contraction and loss of decades-long investments in research infrastructure, our world-class scientific workforce, the health of our communities and residents, our life sciences economy, and the health benefits that accrue to all New Yorkers. Conversely, bold action now will both stabilize the research enterprise and position New York as a global destination for science. EBRI envisions a New York in which all populations have equal opportunity to live long, healthy and productive lives.