NIH'S ROLE IN SUSTAINING THE U.S. ECONOMY

Powering Local Economies and American Leadership

#keepNIHstrong

America's Health and Economic Powerhouse

The National Institutes of Health (NIH) is the world's premier health research agency, driving scientific advances that save lives and improve health. But the NIH is also an economic powerhouse, creating jobs and fueling economic activity in communities across the country, as well as driving innovation that supports America's global leadership.
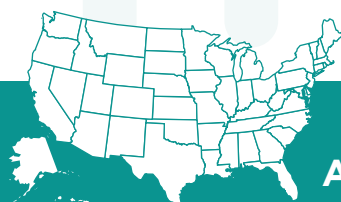
A POWERFUL RETURN ON INVESTMENT

$1 NIH FUNDED RESEARCH

=

$2.56 ECONOMIC ACTIVITY

A powerful return on investment

In Fiscal Year 2024, the $36.94 billion awarded to researchers in the 50 U.S. states and the District of Columbia supported **407,782 jobs** and **$94.58 billion** in new economic activity nationwide.

AN EXPONENTIAL IMPACT

When researchers in a state are awarded NIH funding, the impact of that funding reaches far beyond its original recipients.

NIH-funded medical research

✓ Improves health and provides hope for patients and families

✓ Supports jobs directly and indirectly

✓ Supports the purchase of research-related goods and services

✓ Produces spin-out companies and attracts innovation-intensive businesses

LOCAL IMPACT OF NIH FUNDING

LOCAL IMPACT OF NIH FUNDING

FUNDED RESEARCH
FUNDED RESEARCH
NIH

- Improved Health
- Innovation
- Research & Discovery
- Job Creation
- Attract New Business
- New Sales & Economic Activity
- Labor Force Improvements
- Tax Revenue

Powering Local Economies

EVERY STATE BENEFITS

As NIH funding is awarded to researchers in individual states, that funding supports employment and the purchase of research-related goods, services, and materials. The income generated from these jobs and purchases cycles through the economy to produce new economic activity and other benefits.

NIH RESEARCH SUPPORTS JOBS

39 states with **1,000+** jobs
23 states with **5,000+** jobs
13 states with **10,000+** jobs
7 states with **20,000+** jobs

407,782
TOTAL JOBS IN FY2024

NIH RESEARCH FUELS THE ECONOMY

47 states with **$100M+**
31 states with **$500M+**
23 states with **$1B+**
6 states with **$5B+**

$94.58B
IN NEW ECONOMIC ACTIVITY IN FY2024

PHOTO: UNIVERSITY OF MAINE

RESEARCH HIGHLIGHTS

The University of Alabama at Birmingham houses one of nine cystic fibrosis (CF) research centers in the United States. The university-wide interdisciplinary research center is funded by the NIH, the Cystic Fibrosis Foundation, and institutional resources. Along with the Cystic Fibrosis Care Center at the Children's Hospital of Alabama and UAB Hospital, it fosters an innovative and direct link between basic scientists and clinicians focused on treating and curing CF.

University of Maine Ph.D. candidate Amanda Ignacz is studying rare forms of neuromuscular disease with the support of a predoctoral individual national research service award from NIH. The nationally competitive award honors and invests in pre-doctoral students by helping them obtain research training while conducting their dissertation research.

A Bipartisan Priority

Since FY2015, the NIH budget has grown by more than $17 billion thanks to strong bipartisan congressional support and a commitment to making medical research a critical national priority. These gains helped the agency catch up from a long period of flat funding. In fact, it took 20 years for NIH's purchasing power to return to where it was in 2003. **However, flat funding in FY2024 and tremendous budget uncertainty going forward threaten to derail this progress and diminish NIH's effectiveness.**
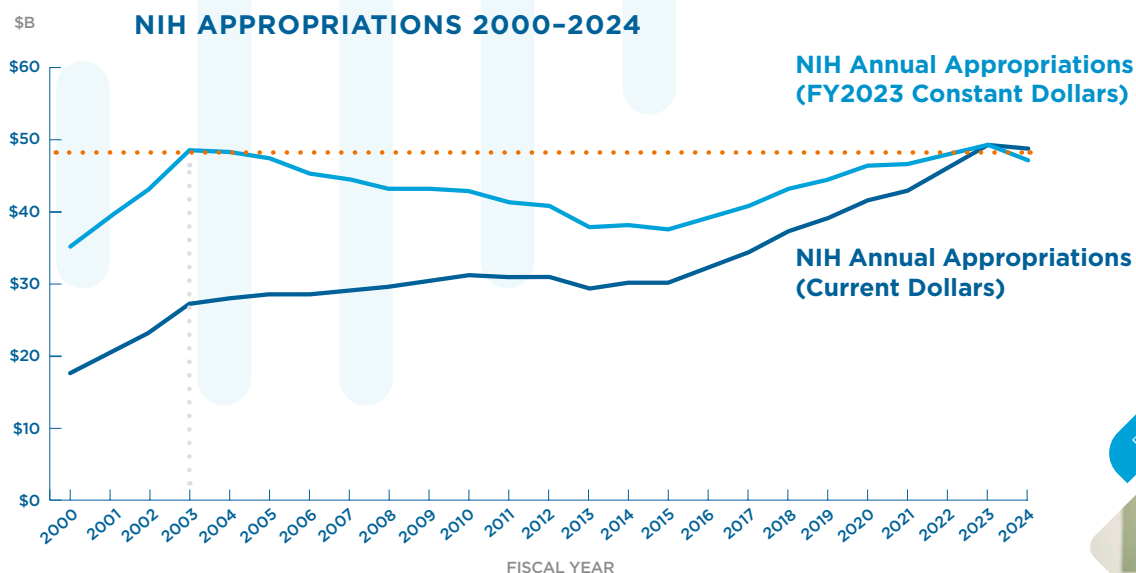
NIH APPROPRIATIONS 2000–2024

$B

NIH Annual Appropriations (FY2023 Constant Dollars)

NIH Annual Appropriations (Current Dollars)

$60
$50
$40
$30
$20
$10
$0

2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024

FISCAL YEAR

FY24 NIH appropriation level does not include ARPA-H.
Source: CRS

PHOTO: BETA BIONICS

NIH RESEARCH MAKES AMAZING THINGS POSSIBLE

The IpsiHand is the first FDA-approved device using brain-computer interface (BCI) technology to help restore function to patients with chronic stroke. The device uses the uninjured, or ipsilateral, side of the brain to improve arm and hand function. IpsiHand was developed by researchers at Washington University in St. Louis with support from the NIH.

The iLet Bionic Pancreas uses next-generation technology to continuously monitor glucose levels and automatically deliver insulin as needed for people with type 1 diabetes. The technology behind the wearable system was developed by researchers at Boston University with support from the NIH. A 2022 NIH study found that the system provided improved type 1 diabetes management compared to standard insulin delivery methods.

A New ChatGPT-like AI Tool for Cancer called CHIEF (Clinical Histopathology Imaging Evaluation Foundation) can diagnose cancer, guide treatment choice, and predict survival across multiple cancer types. Current AI systems are typically trained to perform specific tasks and they tend to work only in a handful of cancer types. CHIEF can perform a wide array of tasks and was tested on 19 cancer types, giving it a flexibility like large language models such as ChatGPT. The work is being led by scientists at Harvard Medical School with support from the NIH.
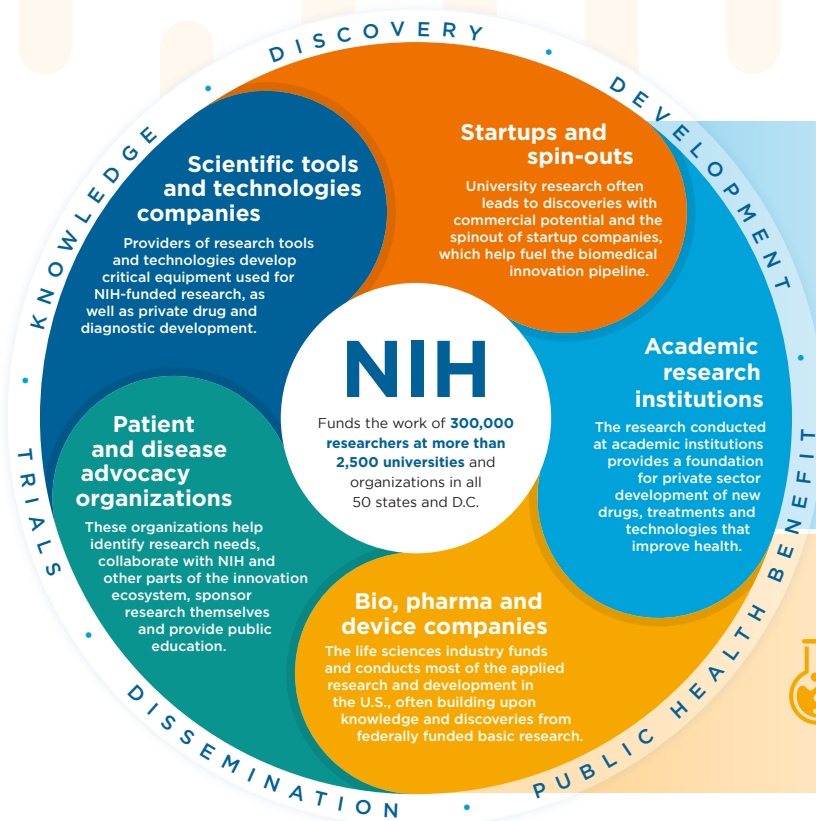
PHOTO: WASH U

The Heart of Biomedical Innovation

By funding the basic scientific research that sets the stage for industry-led applied research and development (R&D), the NIH helps fuel the leadership of the U.S. life sciences, medtech, and biopharmaceutical industries. This research is also key to training scientists, physicians, entrepreneurs, and educators and building the workforce that supports America's global leadership.

Yet, continued U.S. preeminence is not a given. Other countries are investing robustly in R&D and research-intensive industries with an eye toward usurping America's global competitive edge.

DISCOVERY · DEVELOPMENT · KNOWLEDGE · TRIALS · DISSEMINATION · PUBLIC HEALTH BENEFIT

Scientific tools and technologies companies

Providers of research tools and technologies develop critical equipment used for NIH-funded research, as well as private drug and diagnostic development.

Startups and spin-outs

University research often leads to discoveries with commercial potential and the spinout of startup companies, which help fuel the biomedical innovation pipeline.

NIH

Funds the work of **300,000 researchers at more than 2,500 universities** and organizations in all 50 states and D.C.

Patient and disease advocacy organizations

These organizations help identify research needs, collaborate with NIH and other parts of the innovation ecosystem, sponsor research themselves and provide public education.

Academic research institutions

The research conducted at academic institutions provides a foundation for private sector development of new drugs, treatments and technologies that improve health.

Bio, pharma and device companies

The life sciences industry funds and conducts most of the applied research and development in the U.S., often building upon knowledge and discoveries from federally funded basic research.

46% **of all basic research** in the U.S. is conducted at academic research institutions, with most of that research funded by the federal government[1]
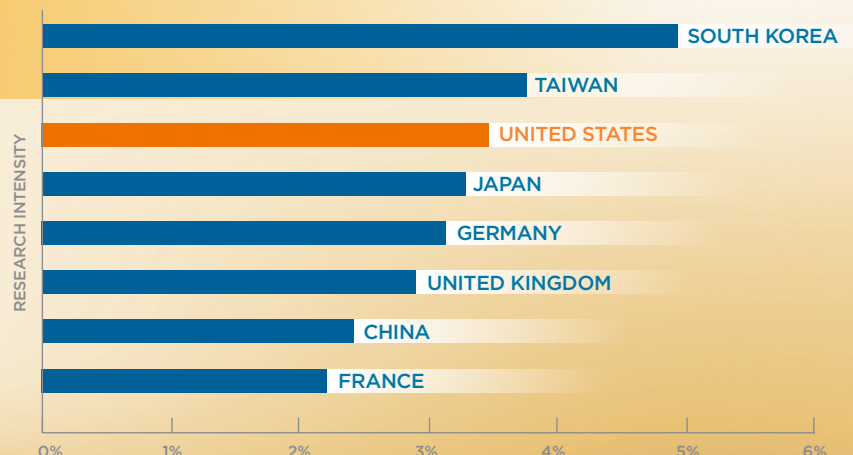
Industry funds **66% of U.S. biomedical R&D**[2]

[1] National Science Foundation, National Center for Science and Engineering Statistics. (2022). U.S. R&D performance and funding, by type of R&D and sector: 2019 [Figure 18]. In The State of U.S. Science and Engineering 2022.

[2] Research!America. (2022, January). U.S. Investments in Medical and Health Research and Development 2016–2020.

HOW THE TOP R&D-PERFORMING COUNTRIES STACK UP

This chart shows how much the world's top eight countries spent on R&D compared to their economic output in 2021. R&D intensity is calculated by dividing a country's R&D spending by its GDP (gross domestic product).

Source: Science & Engineering Indicators 2024

RESEARCH INTENSITY

- SOUTH KOREA
- TAIWAN
- UNITED STATES
- JAPAN
- GERMANY
- UNITED KINGDOM
- CHINA
- FRANCE

0%   1%   2%   3%   4%   5%   6%

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In the last decade, NIH research funding has driven more than $787 billion in new economic activity and supported an average of more than 370,000 jobs per year.

A DECADE OF IMPACT: NIH RESEARCH FUNDING FY2015–FY2024

	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024
Total NIH appropriations	$30.31 billion	$32.31 billion	$34.30 billion	$37.31 billion	$39.31 billion	$41.69 billion	$42.94 billion	$45.18 billion	$47.68 billion	**$47.35* billion**
NIH research funds awarded, U.S.	$22.82 billion	$24.59 billion	$26.10 billion	$28.05 billion	$30.82 billion	$34.65 billion	$35.73 billion	$36.68 billion	$37.81 billion	**$36.94 billion**
NIH research grants awarded, U.S.	50,808	52,470	54,128	57,110	59,421	61,993	62,996	64,657	65,454	**64,359**
Total jobs supported, U.S.	322,399	332,255	337,419	347,247	365,122	393,370	387,774	399,620	412,041	**407,782**
Total economic activity, U.S.	$59.09 billion	$63.07 billion	$66.35 billion	$70.66 billion	$76.96 billion	$85.81 billion	$87.68 billion	$90.17 billion	$92.89 billion	**$94.58 billion**

*In FY2024, total appropriations to NIH were $48.85 billion and included $1.5 billion for ARPA-H. For purposes of this analysis, funding from ARPA-H was excluded because ARPA-H operates as a distinct and separate funding agency.

About this data: The analysis for this report was performed by Ronald Horst, Ph.D., Inforum. Calculation of the jobs and economic activity resulting from NIH research awards in each state relies heavily on the Regional Input-Output Modeling System (RIMS) parameters maintained by the Bureau of Economic Analysis (BEA). BEA updates the RIMS parameters annually, although the economic data used lags by two years. Additionally, BEA does a major, "benchmark," revision to RIMS parameters every five years. UMR's data for FY2024 was calculated in January 2025 using the most recently published RIMS parameters at that time, which rely on economic data for calendar year 2022 and reflect benchmark revisions and significant changes from the RIMS values published over the previous five years. The data shown here for years FY2015-FY2023 was calculated using earlier versions of BEA's RIMS parameters or approximations for those years. Given the way the RIMS parameters change over time, the data presented here for each year should be viewed as a snapshot of the economic effects of NIH funding in that year.

PHOTO: WVU

RESEARCH HIGHLIGHT

West Virginia University microbiologists have identified an antibody that can kill one of the most drug-resistant bacteria. Now, they are working to determine whether it can be combined with other antibiotics to produce a potent treatment against infection.

In addition to understanding how the antibody works to kill bacteria, the researchers hope the study will provide insight into the production of additional antibodies with similar functions against other multidrug-resistant organisms.

Economic Impact of NIH Research by State FY2024

State	NIH AWARDS ($M)	Jobs Created per $1M NIH Awards	Intrastate Jobs	Added Interstate (Jobs, %)	Interstate Jobs	TOTAL EMPLOYMENT	ECONOMIC ACTIVITY ($M)
Alabama	380.3	9.4	3,594.2	22.7	816.8	4,411.0	915.9
Alaska	14.8	8.1	119.9	154.8	185.6	305.5	62.3
Arizona	357.0	10.3	3,670.7	37.4	1,373.1	5,043.8	1,068.1
Arkansas	108.9	9.3	1,012.6	51.2	518.3	1,530.9	293.4
California	5,151.1	9.1	46,702.0	18.5	8,622.4	55,324.4	13,812.8
Colorado	566.8	10.0	5,664.2	22.7	1,287.1	6,951.3	1,591.0
Connecticut	786.7	7.7	6,094.9	12.1	736.4	6,831.3	1,784.9
Delaware	84.0	5.6	473.3	37.3	176.6	649.9	200.8
District of Columbia	219.3	1.7	378.9	30.0	113.5	492.3	425.9
Florida	869.3	11.5	9,986.9	46.3	4,619.0	14,605.9	2,815.5
Georgia	782.9	11.8	9,234.1	25.5	2,359.2	11,593.2	2,273.6
Hawaii	67.4	9.3	626.7	48.5	304.0	930.7	187.8
Idaho	23.5	9.3	217.5	150.0	326.3	543.8	112.1
Illinois	1,275.3	10.1	12,937.0	20.2	2,616.2	15,553.2	3,631.8
Indiana	407.8	9.8	3,986.3	33.9	1,351.0	5,337.3	1,097.6
Iowa	218.2	8.1	1,777.5	37.3	663.5	2,441.1	519.8
Kansas	140.7	8.4	1,188.1	47.4	563.4	1,751.5	394.6
Kentucky	233.9	8.9	2,093.2	34.5	721.7	2,814.9	606.8
Louisiana	211.3	10.5	2,208.6	43.2	954.6	3,163.2	580.6
Maine	124.8	9.6	1,202.4	22.1	266.0	1,468.4	286.4
Maryland	2,432.1	8.8	21,346.9	5.7	1,220.2	22,567.1	5,304.0
Massachusetts	3,458.8	8.2	28,522.0	5.6	1,588.7	30,110.7	7,761.9
Michigan	1,012.5	10.0	10,085.1	17.1	1,724.5	11,809.6	2,566.6
Minnesota	715.2	9.1	6,540.4	18.0	1,175.4	7,715.8	1,764.1
Mississippi	65.0	9.1	594.1	73.1	434.5	1,028.6	199.0
Missouri	901.6	8.9	8,058.5	12.7	1,021.3	9,079.8	2,126.8
Montana	49.0	9.3	453.3	46.3	209.9	663.2	128.7
Nebraska	137.3	9.3	1,275.5	39.8	507.1	1,782.6	354.4
Nevada	32.7	8.5	278.4	219.7	611.7	890.1	199.1
New Hampshire	132.0	7.2	956.7	24.5	234.1	1,190.8	322.9
New Jersey	405.1	9.0	3,639.9	48.7	1,771.5	5,411.4	1,370.6
New Mexico	122.7	8.1	999.9	35.1	351.2	1,351.1	288.9
New York	3,548.1	7.3	26,062.7	17.1	4,459.1	30,521.9	8,269.2
North Carolina	1,975.5	10.0	19,802.6	9.9	1,966.3	21,769.0	4,853.0
North Dakota	24.5	7.8	191.0	102.4	195.6	386.5	83.6
Ohio	1,034.5	10.2	10,533.8	22.4	2,359.2	12,893.0	2,689.6
Oklahoma	156.5	10.7	1,674.8	47.0	786.8	2,461.6	446.7
Oregon	388.3	9.3	3,618.7	22.6	816.2	4,434.8	963.8
Pennsylvania	2,204.3	8.9	19,517.1	11.4	2,222.9	21,740.0	5,311.3
Rhode Island	244.9	7.7	1,875.3	9.4	176.3	2,051.6	502.1
South Carolina	250.2	10.9	2,731.2	33.6	918.7	3,649.9	723.5
South Dakota	28.8	8.6	246.4	83.8	206.4	452.7	90.3
Tennessee	818.6	10.4	8,482.7	15.3	1,293.6	9,776.4	2,198.5
Texas	1,897.5	12.3	23,386.4	30.6	7,166.9	30,553.3	6,126.8
Utah	307.1	11.8	3,638.7	23.0	838.0	4,476.7	835.9
Vermont	55.1	7.9	435.0	24.1	104.7	539.7	124.8
Virginia	594.9	8.7	5,172.3	32.0	1,655.3	6,827.6	1,651.6
Washington	1,260.4	8.3	10,468.5	17.0	1,781.9	12,250.3	3,089.2
West Virginia	54.1	8.0	433.3	62.6	271.2	704.5	147.6
Wisconsin	595.1	9.3	5,546.9	20.8	1,156.4	6,703.3	1,381.4
Wyoming	11.7	8.2	95.9	155.2	148.9	244.8	47.6
50 states plus D.C.	**$36,938**	9.2	339,833	20.0	67,949	**407,782**	**$94,585**

UMR is a coalition of leading research institutions, patient and health advocates, and private industry seeking strong and sustainable increases in funding for the National Institutes of Health to save and improve lives, advance innovation, and fuel the economy. UMR members include: AdvaMed, Alzheimer's Association, American Association for Cancer Research, American Association for the Advancement of Science, American Cancer Society Cancer Action Network, Association of American Cancer Institutes, Association of American Universities, Association of Public and Land-grant Universities, BD, Boston University, Harvard University, Johns Hopkins University, Johnson & Johnson, Massachusetts Institute of Technology, Northwestern University, Stanford University, Texas A&M Univeristy Health, Thermo Fisher Scientific, University of Pennsylvania, Vanderbilt University, Vanderbilt University Medical Center, and Washington University in St. Louis.

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As of March 2025