

Medical Research:

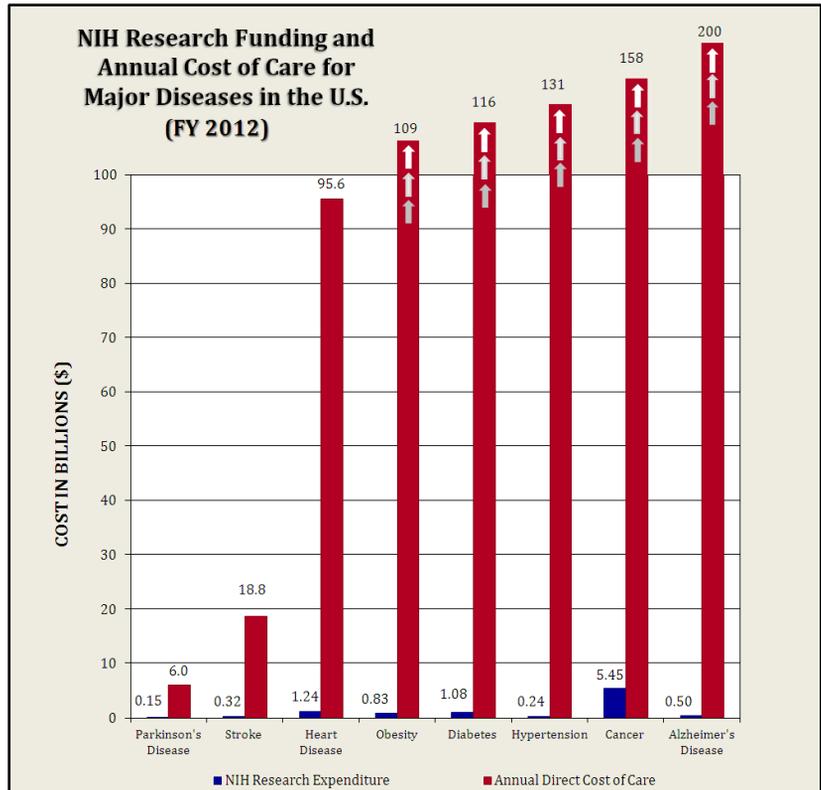
Saving Lives, Reducing the Cost of Health Care, Powering the Economy

"If you think research is expensive, try disease." — Mary Lasker (1901-1994)

THE NATIONAL INSTITUTES OF HEALTH (NIH): RETURN ON INVESTMENT

The Economic Impact of Research

- ❖ NIH plays a pivotal role in the U.S. medical innovation sector, which employs 1 million U.S. citizens, generates \$84 billion in wages and salaries, and exports \$90 billion in goods and services.¹ NIH spending in 2011 alone produced \$62.13 billion in new economic activity.²
- ❖ In 2011, NIH research funding led to the creation of 432,094 jobs.¹ A sequester[†] in 2013 would cut the NIH budget by 8.2%, or \$2.53 billion, resulting in nearly 35,000 fewer jobs across the U.S.²
- ❖ The economic value of gains in U.S. average life expectancy has been estimated to be roughly \$95 trillion from 1970 to 2000. Since 1990, our nation has gained about one year of longevity every six years with the help of NIH-supported research.³
- ❖ The federal investment of \$3.8 billion in the Human Genome Project from 1988 to 2003 helped drive \$796 billion in economic output—a return on investment of \$141 for every \$1 invested.⁴



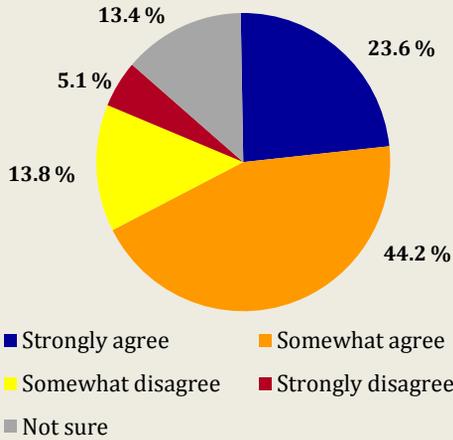
How Research Saves Money

- ❖ By decreasing hospitalizations, beta-blockers developed by the NIH and the life sciences industry reduce Medicare expenditures by \$6,000 per patient.⁵
- ❖ Studies have shown that preventing as few as 5% of new cases of chronic conditions, including obesity and related complications, would reduce Medicare and Medicaid spending by nearly \$5.5 billion a year by 2030.⁶
- ❖ Permanently reducing cancer mortality by merely 1% would be worth nearly \$500 billion^{††}. A full cure for cancer would generate approximately \$50 trillion^{†††}, which is more than three times today's GDP.⁷
- ❖ The average cost of caring for an Alzheimer's patient is \$5,000 a month. Treatments that delay the onset and progression of Alzheimer's disease by six years could produce annual savings of \$51 billion by 2015, \$126 billion by 2025, and \$444 billion by 2050.⁸
- ❖ The use of the clot-busting drug t-PA in stroke patients saves the U.S. about \$60 million in direct costs per year or \$6,074 per use.⁹
- ❖ Reducing the new diagnosis rate of Parkinson's disease by 1% could save an average of \$250 million per year in treatment, Social Security payments and lost productivity.¹⁰
- ❖ All diabetics, approximately 26 million in the U.S., are at risk for developing diabetic retinopathy.¹¹ NIH-funded researchers have helped develop new treatments that delay or prevent diabetic retinopathy, saving the U.S. \$1.6 billion a year.¹²



Voter Majority: Government Should Increase Support for Medical Research

Do you agree or disagree with the following statement? "The federal government should increase support for scientific research that advances the frontiers of knowledge and supports private sector innovation."



Source: National Public Opinion Poll, August 2012, J/Z Analytics for Research/America

How Research Saves Lives

- ❖ Over the past 40 years, NIH-supported research contributed to the discovery of 153 new FDA-approved drugs, vaccines or new indications for current drugs.³
- ❖ In the 1980s, the diagnosis of HIV infection was a death sentence. Due to antiviral drugs developed by the NIH and private industry, today an HIV-positive 20-year-old can be expected to reach old age.¹³
- ❖ The survival rate for children with the most common childhood leukemia (acute lymphocytic leukemia) was 4% in 1962. NIH-supported research played a meaningful role in increasing the survival rate to 90%.¹⁴
- ❖ In 2005, NIH-sponsored clinical trials showed that adding the drug trastuzumab to standard chemotherapy cut the risk of breast cancer recurrence by 40% for women whose tumors are genetically matched to this drug.¹⁵
- ❖ Cervical cancer claims the lives of nearly 4,000 women each year in the United States.¹⁶ Due to groundbreaking NIH research and private sector development, two FDA-approved vaccines (Gardasil and Cervavix) are now available to prevent the development of cervical cancer.¹⁷

"I don't think there's a question, we ought to put a priority on research in this country. Washington does a lot of things that perhaps we ought to re-examine and say it ought not be doing anymore but one thing that I think the country expects is leadership in research because it has a huge leverage effect in our quality of life in what we can do in productivity."

– **Eric Cantor**, Majority Leader, U.S. House of Representatives



"One of the great challenges of our time is bringing down the cost of healthcare ...we're not going to bring down the cost of health care unless we invest in NIH and other ways and means to bring down health care. We need to convince America that we need to continue to invest."

– **Steny Hoyer**, Minority Whip, U.S. House of Representatives



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[†]Sequestration according to the Budget Control Act of 2011

^{††}The prospective economic value of further improvements in health

^{††††}The aggregate life-year value of remaining lives