

Research: An Economic Driver

"If you think research is expensive, try disease."

— Mary Lasker 1901–1994

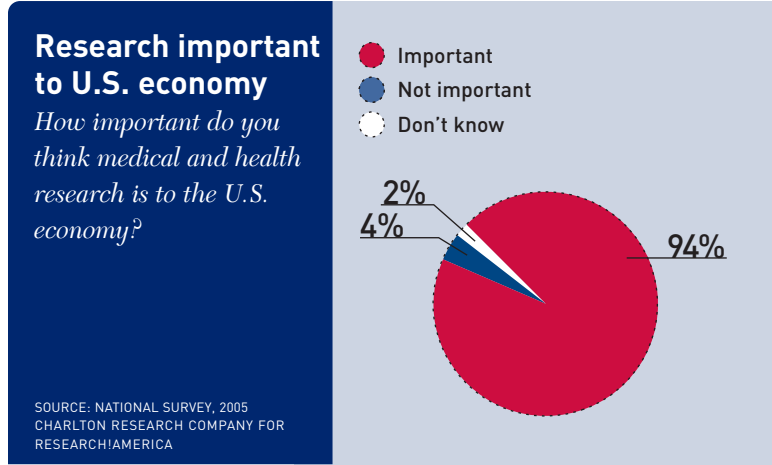
Today:

- ⚡ Research is the supply side of medical and scientific innovation. Bioscience industries—such as biotechnology, medical device and pharmaceutical—are rooted in research and development (R&D) and require new discoveries to remain competitive.*
- ⚡ More than 1.2 million people in the United States are currently employed in the biosciences. The Bureau of Labor Statistics projects that employment in the biosciences will grow at an annual rate 13 percent greater than the rate of overall employment.**
- ⚡ A \$1 increase in public basic science funding stimulates \$3.15 in pharmaceutical investment.***

SOURCE: *FOSSUM, D. ET AL, DISCOVERY AND INNOVATION: FEDERAL RESEARCH AND DEVELOPMENT ACTIVITIES IN THE 50 STATES, DISTRICT OF COLUMBIA AND PUERTO RICO, RAND, 2000

**GROWING THE NATION'S BIOSCIENCE SECTOR: STATE BIOSCIENCE INITIATIVES 2006, BATTELLE TECHNOLOGY PARTNERSHIP PRACTICE AND SSTI

***TOOLE, A, DOES PUBLIC SCIENTIFIC RESEARCH COMPLEMENT INDUSTRY R&D INVESTMENT? THE CASE OF NIH-SUPPORTED BASIC AND CLINICAL RESEARCH AND PHARMACEUTICAL INDUSTRY R&D, 2002



SAVING LIVES SAVING MONEY

HOW RESEARCH SAVES LIVES:

- ⚡ Death rates from the nation's number one killer, heart disease, have been cut by more than 60 percent in the past 50 years.
- ⚡ Gleevec represents a new class of anti-cancer drugs with minimal side effects. The basic scientific concepts and the cancer-causing molecule that Gleevec targets were discovered 20 years ago by scientists funded by the National Institutes of Health. Private investment created the drug. This success story exemplifies the need for public/private partnerships throughout the R&D continuum.

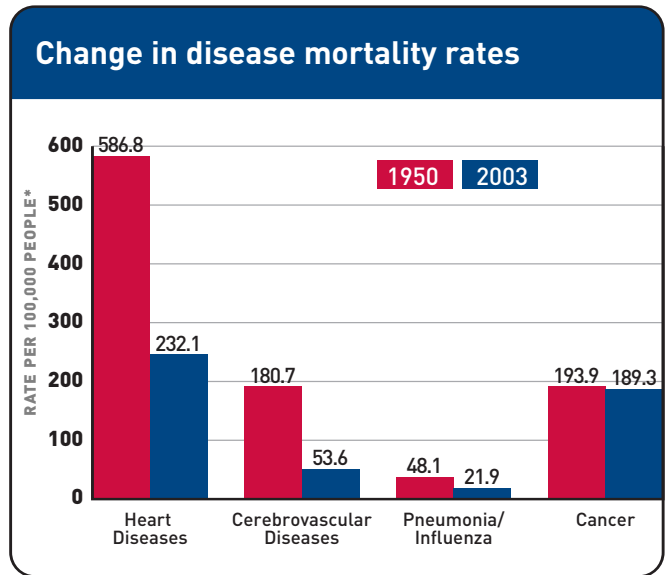
SOURCE: CENTERS FOR DISEASE CONTROL AND PREVENTION (WWW.CDC.GOV)
NATIONAL INSTITUTES OF HEALTH (WWW.NIH.GOV)

HOW RESEARCH SAVES MONEY:

- ⚡ Economists estimate a \$7 return to the economy for every \$1 spent on technological innovations in heart attack care.*
- ⚡ Economists estimate that improvements in health from 1970 to 2000 were worth \$95 trillion (\$3.2 trillion a year). During the same time period, the U.S. invested \$200 billion in the National Institutes of Health. Making a conservative estimate that 10% of the overall health savings (\$9.5 trillion) resulted from NIH-funded research, our investment in medical research has provided a 50-fold return to the economy.**

SOURCE: *CUTLER, D AND MCCLELLAN, M, IS TECHNOLOGICAL CHANGE IN MEDICINE WORTH IT?, HEALTH AFFAIRS, 2001, 20:11-29

**MURPHY, KM AND TOPEL, RH, THE VALUE OF HEALTH AND LONGEVITY, NATIONAL BUREAU OF ECONOMIC RESEARCH WORKING PAPER SERIES, WORKING PAPER 11405, JUNE 2005



ADAPTED FROM "CANCER FACTS AND FIGURES," AMERICAN CANCER SOCIETY
SOURCES: 1950 MORTALITY DATA—CDC/NCHS, NVSS, MORTALITY REVISED.
2003 MORTALITY DATA—NATIONAL VITAL STATISTICS REPORT, VOL. 53, NO. 15.
*AGE-ADJUSTED TO 2000 US STANDARD POPULATION.

Cancer and diabetes alone cost more in one year (\$322 billion) than the United States has invested in the National Institutes of Health (\$307 billion) since its founding 118 years ago.

facts about: } Research: An Economic Driver



“Public funding has expedited growth in the life sciences and catalyzed private interest in the sector.”

FEDERAL RESERVE BANK OF DALLAS

Why invest?

- ∴ Our nation's most valuable asset is human capital. Healthier citizens are the key to robust economic growth and greater productivity.
- ∴ The average American spends almost \$6,700 a year on health care. Less than 6% of that amount is invested in research to prevent, treat and cure diseases and disabilities.*
- ∴ Heart disease, stroke, cancer, diabetes and Alzheimer's disease alone cost an estimated \$771 billion in 2003.**
- ∴ The average cost of caring for an Alzheimer's patient is \$5,000 a month. A delay in the onset and progression of Alzheimer's disease by five years could save \$50 billion a year in health care costs.***
- ∴ Increased investment in science and innovation is required for our national security.

SOURCE: *CENTERS FOR MEDICARE AND MEDICAID (WWW.CMS.GOV)

**2005 INVESTMENT IN U.S. HEALTH RESEARCH, RESEARCH!AMERICA (WWW.RESEARCHAMERICA.ORG/PUBLICATIONS/APPROPRIATIONS/HEALTHDOLLAR2005.PDF)

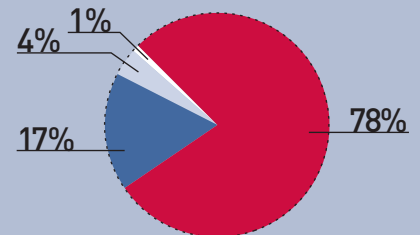
***INVESTMENT IN RESEARCH SAVES LIVES AND MONEY SERIES OF ONE-PAGE FACT SHEETS, LASKER FUNDING FIRST (WWW.LASKERFOUNDATION.ORG/REPORTS/ONEP_REPORTS.HTML) AND RESEARCH!AMERICA (WWW.RESEARCHAMERICA.ORG/ADVOCACY/INVESTMENT.HTML)

***ALZHEIMER'S ASSOCIATION (WWW.ALZ.ORG)

U.S. should be global leader in medical and health research

How important do you think it is that the U.S. is a global leader in medical and health research?

- Very
- Somewhat
- Not
- Don't know



SOURCE: THE PARADE/RESEARCH!AMERICA HEALTH POLL, CHARLTON RESEARCH COMPANY, 2005

Hope for the Future:

Our ability to lead in 2025 will be a function of current decisions. Increasing our investment in science and discovery is a sound and responsible national security policy. No other federal expenditure will do more to create jobs, grow wealth, strengthen our world leadership, protect our environment, promote better education or ensure better health for the country. We must make the commitment to increase our investment now.

FORMER SPEAKER NEWT GINGRICH, FOUNDER OF THE CENTER FOR HEALTH TRANSFORMATION AND AUTHOR OF "SAVING LIVES & SAVING MONEY"

“Our nation must make a...bold commitment to invest in the future of our country by tripling the innovation budget—federal basic research and development—over the next decade.”

U.S. REP. FRANK WOLF, *Virginia, 10th District Chair, Appropriations Subcommittee on Science, State, Justice and Commerce*

Research!America

1101 King Street, Suite 520 • Alexandria, Virginia 22314
703.739.2577 • 1.800.366.CURE • Fax 703.739.2372
www.researchamerica.org • info@researchamerica.org

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