

Investment in research saves lives and money



facts about:

Research: An Economic Driver

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

- Mary Lasker 1901-1994

Innovation not only saves lives, it fuels our economy.

In 2015:

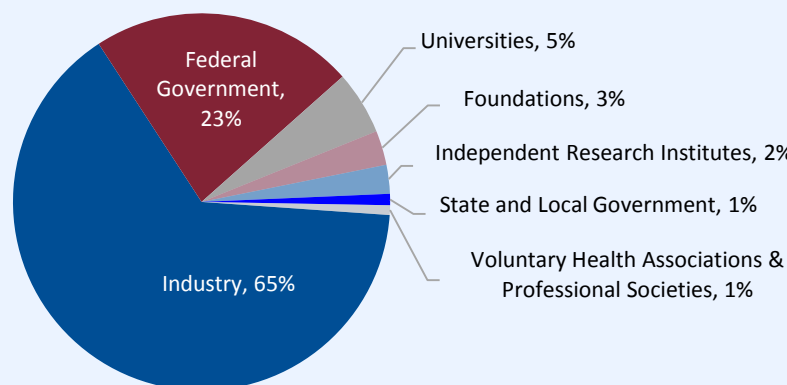
- Pharmaceutical manufacturers, biotech, medical device manufacturers and other life sciences industry members invested \$102.7 billion in U.S. medical and health R&D.[^]
- In U.S. federal agencies invested a total of \$35.9 billion in medical and health R&D.[^]
- The pharmaceutical and medical device industry accounted for more than \$92 billion in exports.⁺

[^] RESEARCHIAMERICA, 2016. U.S. INVESTMENTS IN MEDICAL AND HEALTH RESEARCH AND DEVELOPMENT.

^{*} PHRMA, 2016. BIOPHARMACEUTICAL RESEARCH INDUSTRY PROFILE.

⁺ INTERNATIONAL TRADE ADMINISTRATION <WWW.TRADE.GOV>

U.S. Medical and Health R&D Expenditures by Sector



RESEARCHIAMERICA, 2016. U.S. INVESTMENTS IN MEDICAL AND HEALTH RESEARCH AND DEVELOPMENT.

"If we want America to remain the epicenter of medical innovation, we need to engage in passionate advocacy from across the ecosystem to create a groundswell around medical research."

Dr. Jeffrey D. Bloss, Senior Vice President, Astellas Medical Affairs, Americas

SAVING LIVES
SAVING MONEY

Why Invest?

- Every dollar invested in research by the National Institutes of Health (NIH) generates an estimated \$2.20 in local economic growth.^{*}
- Most Americans believe that research is underfunded. Only 5 cents of each health dollar is spent on research, and 56% of Americans believe that this is not enough.^{^+}
- Research funding doesn't just stay in the lab. An estimated 1 of every 7 dollars in federal research funding goes to vendors and service providers, generating jobs and business opportunities throughout the economy. Additionally, for every job in the biopharmaceutical industry, 2 jobs are created for vendors and service providers.^{‡♦}
- Case Study: The NIH-funded Human Genome Project generated \$141 dollars in economic activity for every \$1 invested in the initiative.[°]

^{*} ROCKEY, S. EXTRAMURAL NEXUS, 2012.

[^] RESEARCHIAMERICA, 2016. U.S. INVESTMENTS IN MEDICAL AND HEALTH RESEARCH AND DEVELOPMENT.

⁺ A RESEARCHIAMERICA SURVEY CONDUCTED IN PARTNERSHIP WITH ZOGBY ANALYTICS IN JANUARY 2016.

[‡] WEINBERG, ET AL. SCIENCE, 2014. 344(6179): 41-43.

The Workforce:

- The biopharmaceutical industry directly employs 854,000 people and indirectly supports an additional 3.6 million jobs throughout the U.S. economy.[♦]
- In 2000, the U.S. employed more researchers than any other country. However, since 2010, China has surpassed the U.S. and now consistently employs more researchers.[□]
- Science and engineering jobs are in high demand even during times of economic stagnancy. While the national job growth rate remained relatively unchanged between 2008 and 2014, jobs in science and engineering continued to increase, resulting in an estimated 500,000 more jobs.[•]

[♦] PHRMA, 2016. BIOPHARMACEUTICAL RESEARCH INDUSTRY PROFILE.

[□] NATIONAL INSTITUTES OF HEALTH <WWW.GENOME.GOV>

[□] OECD, 2016. MAIN SCIENCE AND TECHNOLOGY INDICATORS.

[•] NATIONAL SCIENCE FOUNDATION <WWW.NSF.GOV>

facts about: } Research: An Economic Driver

TODAY:

- Public-private partnerships, such as the Accelerating Medicines Partnership, are working to reduce the time it takes to develop new medical advances, foster collaboration and spur investment, increasing the potential for the discovery of life changing therapies.
- Case Study: Researchers have developed best practices for diagnosing and preventing septicemia in the hospital setting. Septicemia is the leading driver of hospital care costs, and compliance with these best practices can cut mortality rates in half and save over \$3,000 per patient.*

TOMORROW:

- Researchers at Johns Hopkins University have suggested that an HIV vaccine may be just 10 years away. A vaccine that is 30% effective would avoid over 240,000 potentially deadly infections globally in the first 10 years, saving over \$87 billion dollars in lifetime care costs.*^
- Type-1 diabetes (T1D) results in \$14.4 billion dollars in direct medical costs and lost wages. Pancreatic islet transplantation and stem cell therapies currently in clinical trials hold great promise, not just for treating, but for curing T1D.□‡

* MILLER ET AL. AM. J. RESPIR. CRIT. CARE MED., 2013. 188(1): 77-82.

□ VIACYTE <VIACYTE.COM>

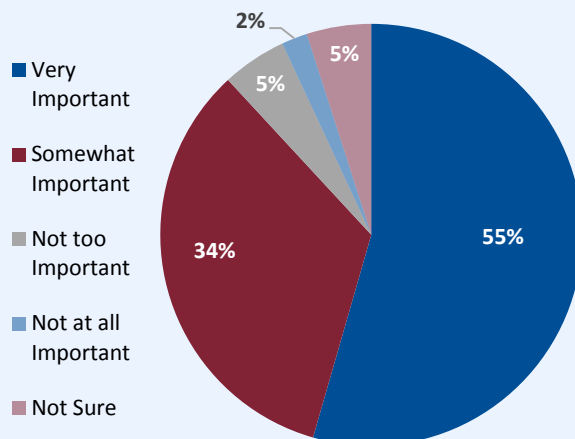
+ HUANG ET AL. IMMUNITY, 2016. 45(5): 1108-1121

‡ NORTHWESTERN MEDICINE <WWW.NM.ORG>

^ WORLD HEALTH ORGANIZATION <WWW.WHO.INT>

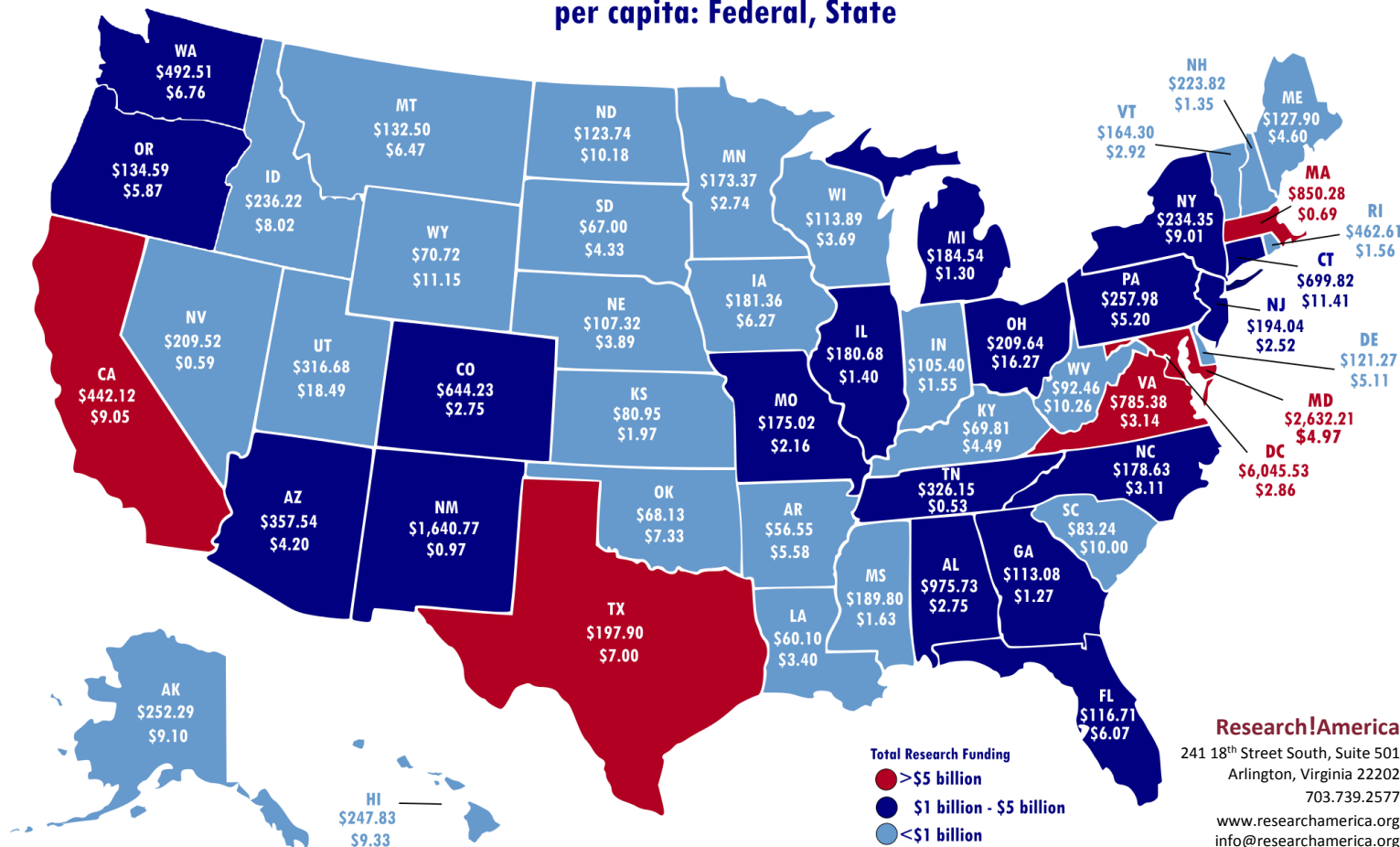
Research is Key to Job Creation

How important is investing in research to job creation, technological breakthroughs and economic growth?



A RESEARCH!AMERICA SURVEY CONDUCTED IN PARTNERSHIP WITH ZOGBY ANALYTICS IN JANUARY 2016.

Research and Development Funding, 2013 per capita: Federal, State



SOURCE: NATIONAL SCIENCE FOUNDATION

Research!America

241 18th Street South, Suite 501
Arlington, Virginia 22202
703.739.2577
www.researchamerica.org
info@researchamerica.org

The Albert and Mary Lasker Foundation is a founding partner in this series of fact sheets. www.laskerfoundation.org

9.4.217