RESEARCH AMERICA
AN ALLIANCE FOR DISCOVERIES IN HEALTH

Department of Defense

Today:

:: Department of Defense (DoD) research informs the development of cutting edge treatments and technologies that support the military and protect the lives of all citizens.

:: In 2016, DoD funded $2.1 billion in medical and health research and development (R&D).*

:: DoD research is conducted within the military branches (Army, Air Force and Navy) as well as by defense-wide agencies, like the Defense Advanced Research Projects Agency (DARPA).

:: The DoD also grants funding to external scientists based in academia and industry to carry out research.

:: In 2016, DoD accounted for 5.6% of total federal medical and health R&D funding.*

* U.S. INVESTMENTS IN MEDICAL AND HEALTH RESEARCH AND DEVELOPMENT 2013-2016, RESEARCH!AMERICA AND TECONOMY, 2017.

Select Initiatives

Rapid Diagnostics

DoD funding contributed to the 2017 approval of the first diagnostic tool to rapidly identify the antibiotic susceptibility of a bloodstream infection. This innovation will lead to a decrease the diagnosis time, while also providing information on the antibiotic most likely to effectively treat the infection. Supported by the DoD Congressionally Directed Medical Research Program (CDMRP), this technology will be a valuable tool in the fight against antibiotic resistant bacteria, which infect 2 million Americans every year.+ ^ ‡

ARPANET

The development and launch of the Internet is at the center of the information revolution. DARPA's development of the groundbreaking communications network, ARPANET, in 1969 allowed digital resources to be shared between non-adjacent computers for the first time. DARPA played a major role in the development and growth of the Internet, helping to create the programming infrastructure necessary for modern internet communications.♦

Dip Pen Nanolithography

As technology continues to get smaller, a 1999 invention the Air Force Office of Science Research, National Science Foundation and DARPA jointly funded, has become increasingly important. Dip pen nanolithography (DPN) is a technique that manipulates nanomaterials to create a specific structure, such as those needed in the creation of small circuit boards for electronic devices like cell phones and pacemakers. •○

+ ACCELERATE DIAGNOSTICS, 2017.
^ CONGRESSIONAL DIRECTED MEDICAL RESEARCH PROGRAM, DEPARTMENT OF DEFENSE, 2016.
‡ FOOD AND DRUG ADMINISTRATION, HEALTH AND HUMAN SERVICES, 2017.
♦ DEFENSE ADVANCED RESEARCH PROJECTS AGENCY <WWW.DARPA.MIL>
● NORTHWESTERN UNIVERSITY, 2017.
○ BERRY, WILLIAM AND CHERYL LOEB, CENTER FOR TECHNOLOGY AND NATIONAL SECURITY POLICY, NATIONAL DEFENSE UNIVERSITY, 2006.

Department of Defense Combatting Ebola

During the 2014-2015 Ebola epidemic, DoD played an important role in stopping the spread of infection to protect Americans from this deadly threat.

Command & Control

When DoD officials arrived in West Africa, their main goal was to support the United States Agency for International Development (USAID) disease assistance response team (DART). DoD set up central headquarters in Liberia to organize the United States response across all engaged agencies.

Engineering

DoD personnel, including the Navy Seabees, designed and constructed mobile research labs, Ebola treatment units (ETUs), and living facilities for the thousands of troops and American health care providers working to address the epidemic.

Logistics

DoD supplied ground and air vehicles to move supplies and personnel around the predominantly rural region.

Medical Training

DoD, including the Defense Threat Reduction Agency (DTRA), worked with local communities to set up surveillance systems, initiate medical countermeasures, and train health care workers within ETUs.

Vaccine

U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID) and Walter Reed Army Institute of Research (WRAIR) were instrumental during efficacy studies on an experimental Ebola vaccine. Studies suggest the vaccine candidate is highly protective, with none of the 5,837 people who received the vaccine in the study testing positive for Ebola.

The Department of Defense works to remain on the cutting edge of research to ensure the health and safety of all Americans. Tasked with the protection of all citizens, the DoD has long recognized the importance of innovative medical and health research to meet that goal.

A naval officer demonstrates the use of a field containment kit to test viruses such as Ebola.

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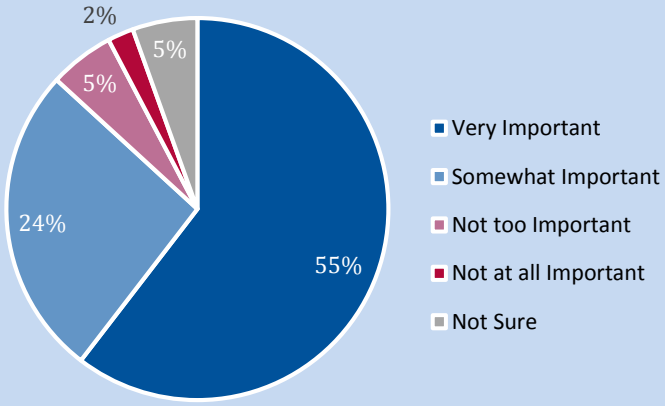
Majority agree research investments fuel the economy

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



A RESEARCH!AMERICA SURVEY OF U.S. ADULTS CONDUCTED IN PARTNERSHIP WITH ZOGBY ANALYTICS IN JANUARY 2016.

SOURCES: DEFENSE THREAT REDUCTION AGENCY, DEPARTMENT OF DEFENSE <WWW.DTRA.MIL>
ROULO, CLAUDETTE. DEPARTMENT OF DEFENSE, 2015.
JOINT AND COALITION OPERATIONAL ANALYSIS, 2016.
WORLD HEALTH ORGANIZATION <WWW.WHO.INT>
REGULES, J. ET AL. N ENGL J MED, 2017. 376: 330-341.

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