

DoD

The U.S. Commitment to Global Health R&D

RESEARCH AMERICA
IN RELIANCE FOR DISCOVERIES IN HEALTH



THE U.S. DEPARTMENT OF DEFENSE operates at the intersection of security and health worldwide, building capacity, strengthening infrastructure, and working to safeguard and improve civilian health in areas where troops may be deployed. The DoD is involved in the development of medical treatments and preventions, plays a key role in humanitarian assistance efforts and health diplomacy, and protects American troops and civilians worldwide.



Global Health Research and Development:

working to improve lives at home and abroad.

DoD BY THE NUMBERS

- The military played a significant role in the development of **25%** of the total innovative vaccines licensed in the U.S. since 1962
<https://midrp.amedd.army.mil/info/HAchieve.html>
- For every **\$1** spent on diplomacy and development, **\$5** is saved in defense Source: Global Health Security, Stimson Center
- The DoD invested **\$47 million** in 2010 to support its infectious disease research efforts Source: The American Society of Tropical Medicine and Hygiene, Tropical Disease and Military Preparedness 2011 Issue Brief

“The DoD laboratories’ [global health activities] result in medical advances that not only save the lives of men and women in uniform, but also have dramatic health benefits for all populations vulnerable to neglected diseases.” Source: CSIS Report 2011: The Defense Department’s Enduring Contributions to Global Health

“Successful development of new drugs and vaccines by the Department of Defense to prevent infection and diseases like HIV, dengue, and malaria will have a significant global health impact for humanity. Our work is a cornerstone of military medical diplomacy.”

COL KENT E. KESTER *Former Commander, Walter Reed Army Institute of Research*

SMART COLLABORATIONS IN GLOBAL HEALTH

Product Development Partnerships



STEVEN G. REED, PH.D.
PRESIDENT AND CHIEF
SCIENTIFIC OFFICER
IDRI

The **Infectious Disease Research Institute** is part of a product development partnership (PDP) committed to applying innovative science to the research and development of products that treat and prevent infectious diseases of poverty. Currently, IDRI is partnering with the DoD and U.S. Agency for International Development to create a vaccine for malaria scheduled to enter clinical trials in 2012. Malaria causes approximately one million deaths annually, affecting U.S. soldiers, tourists, and those living in 40 affected countries worldwide. Malaria also affects workforce productivity in these countries along with lowered school attendance, decreased tourism, and lower crop production, and limits foreign investment in the affected region. This DoD partnership is crucial to achieving a more comprehensive plan for reducing malaria. Source: <http://www.idri.org/>

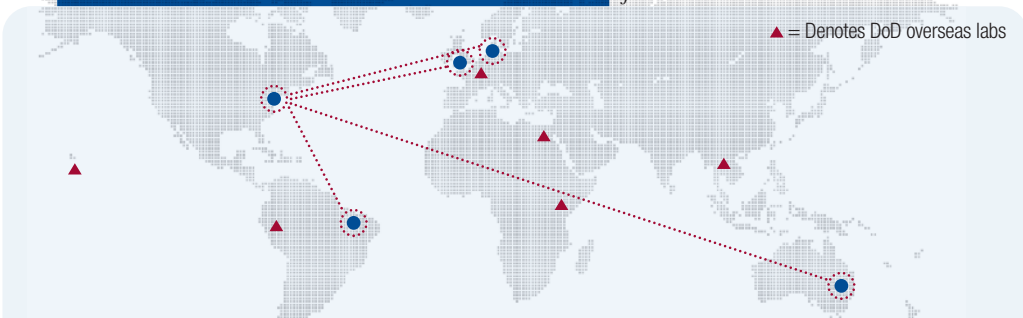
Global Health R&D

A SMART THING FOR THE U.S.
THE RIGHT THING FOR THE WORLD.

PARTNERING TO SAVE LIVES

Global health R&D partnerships foster success at home and abroad

▲ = Denotes DoD overseas labs



DOD OVERSEAS LABS Egypt, Germany, Hawaii, Kenya, Peru, Thailand

HOOKWORM VACCINE PROJECT PARTNERS Walter Reed Army Institute for Research (WRAIR), iBio, Sabin Vaccine Institute, The Fraunhofer Center for Molecular Biotechnology, Dutch Ministry of Foreign Affairs and the Brazilian Ministry of Health

PARTNER LOCATIONS U.S., Brazil, Netherlands, London, Australia, and others

GOAL To develop a hookworm vaccine

The **Army and Navy Overseas Labs** conduct medical research tied directly to the protection of deployed personnel. These labs develop health products including vaccines, drug therapies and medical devices to improve health worldwide and to build local medical and scientific capacity in the regions in which they operate. Source: CSIS Report 2011: The Defense Department's Enduring Contributions to Global Health

The **Walter Reed Army Institute for Research (WRAIR)** has been working with partners to create a hookworm vaccine, which has recently entered into its first clinical trial (the first of its kind for a hookworm vaccine). Hookworm affects 600 million people worldwide and causes 65,000 deaths. This vaccine has the potential to help the U.S. soldiers, children, and women of reproductive age who are who are victims of this disease. Source: wrair-www.army.mil

Global Health Research and Development Progress

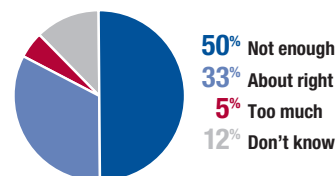
The Department of Defense protects and health and safety of Americans and supports global health R&D that stimulates job growth at home, promotes a stable global economy and ensures a safer, healthier world.

- ▶ In 2009, WRAIR completed the world's largest HIV vaccine trial in Thailand. Results demonstrating that this vaccine reduced HIV infection by 32% have revitalized the field of HIV vaccine research. Source: WRAIR HIV factsheet, www.army.mil, CSIS Report 2011: The Defense Department's Enduring Contributions to Global Health
- ▶ DoD developed a diagnostic test scheduled for FDA clearance in 2011 for leishmaniasis, a neglected tropical disease diagnosed in 3,500 people in Afghanistan and Iraq since 2003. Source: WRAIR Malaria and Leishmaniasis Drug Development Factsheet, wrair-www.army.mil
- ▶ The military co-developed more than half of the routine vaccines currently given to service members. Additional vaccines in advanced development stages include vaccines for malaria, dengue, hepatitis E, and more. Source: https://midrp.amedd.army.mil/info/HAchieve.html
- ▶ In 2010, the Naval Medical Research Center developed a novel gene-based malaria vaccine candidate that protected four volunteers from the disease during initial clinical trials, showing great promise. Source: http://www.med.navy.mil/sites/nmrc/documents/002-2010_FINAL_New_Approach_to_a_vaccine_against_malaria_28Apr10.pdf
- ▶ In response to the H1N1 flu pandemic, the DoD's Global Emerging Infectious Surveillance and Response System worked closely with the CDC to isolate the first cases and aid in vaccine manufacturing with San Diego's Naval Research Center and San Antonio's U.S. Air Force School of Aerospace Medicine. Source: Fatima S. Dawood, et al, "Emergence of a Novel Swine-Origin Influenza A (H1N1) Virus in Humans" New England Journal of Medicine 360, no 25
- ▶ The WRAIR Viral Diseases Department has developed many vaccines for the global health community including the first flu vaccine (1948), an oral adenovirus vaccine (1980), a Japanese encephalitis virus vaccine (1992, 2009) and a Hepatitis A vaccine (1995). Source: WRAIR Viral Disease factsheet, wrair-www.army.mil

What Americans are saying about the DoD and R&D

Not Enough Support for Military Health Research

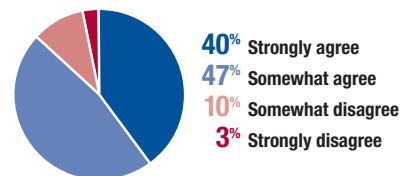
Would you say government support for health research for the benefit of veterans and services members is...



Source: Your Congress - Your Health Survey, March 2011
Charlton Research Company for Research!America

Military Research Investment Good Use of Tax Dollars

Do you agree or disagree with the following statement? "The U.S. military investment in research to improve health for service members is a good use of my tax dollars."



Source: Your Candidates - Your Health Poll, August 2010
Charlton Research Company for Research!America



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Less than one penny of every U.S. health dollar goes toward global health R&D.