

Global Health R&D

→ *A smart investment for* **MARYLAND**



Global Health Research and Development:
working to improve lives at home and abroad.

Maryland by the Numbers

- ⌘ Maryland is home to nearly 500 bioscience companies and 50 research-intensive federal institutes and centers. Source: State of Maryland, 2010
- ⌘ In 2009, Governor Martin O'Malley launched *BioMaryland 2020*, a 10-year, \$1.3 billion strategy to further boost Maryland's bioscience industry. Source: State of Maryland, 2010
- ⌘ University of Maryland (UMD) School of Medicine sent teams of physicians, nurses and other staff who rotated between Port-au-Prince and Baltimore on a continuous basis for six months and donated 12 tons of medical supplies in a sustained response to the 2010 earthquake in Haiti. Source: UM SOM 2010 Annual Report

Job Creation

- ⌘ Maryland is home to both the Food and Drug Administration (FDA) and the National Institutes of Health (NIH), the world's largest medical research institute. Together, they employ 25,000 people. Source: FDA & NIH
- ⌘ Maryland's life sciences sector supported 71,600 jobs in 2010. Workers in the life sciences industry earned, on average, more than \$91,000 – 76% more than the state average. Source: Life Sciences Maryland Jobs Analysis + Economic Impact Report 2011.
- ⌘ Johns Hopkins University and Health System are among Maryland's largest employers with 47,000 employees. Hopkins contributes more than \$10 billion per year to the state's economy. Sources: National Science Foundation; Johns Hopkins University
- ⌘ The proposed UMD School of Medicine Health Sciences Facility for biomedical research is anticipated to generate more than 1,200 permanent jobs and \$146 million in annual economic output. Source: UMD SOM Annual Report 2010.

HEALTH IMPACT: Pneumonia

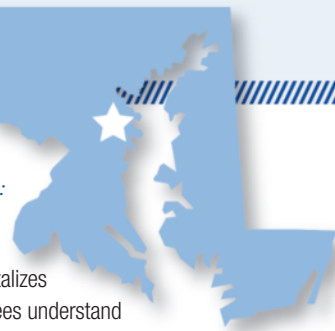
- ▶ **NIH invests more than \$1 billion in Maryland for biomedical research, which has helped not only lower death rates from chronic diseases including heart disease, stroke and cancer and also protect millions from infectious diseases like rubella, whooping cough and pneumonia through vaccines.** Source: www.gov.state.md.us, 2010
- ▶ **The Johns Hopkins Bloomberg School of Public Health recently launched the largest global study into the causes of childhood pneumonia, a collaboration between five African and two Asian research sites. Pneumonia claims 800,000 lives each year; over 50,000 of those are in the U.S.** Source: International Vaccine Access Center
- ▶ **A 2011 study by the Johns Hopkins International Vaccine Access Center showed that pneumonia vaccines represent \$68 billion in projected savings and 6.4 million lives saved over a nine-year projection period.** Source: Health Affairs

MARYLAND: PROFILES AND PARTNERSHIPS

Product development partnerships use a unique, non-profit business model in which public, private, academic and philanthropic sectors partner to accelerate the creation of drugs, vaccines and diagnostics to advance health. PDPs pave the way for new research and product development for the most vulnerable populations as quickly and cheaply as possible. Two PDPs based in Maryland are:

Aeras Rockville ⌘ Every second, a person somewhere in the world is infected with TB, and the current TB vaccine has been ineffective at stopping its spread. Aeras is out to change that with the development of new TB vaccines and other prevention technologies. Aeras capitalizes on the expertise of its partners to fast-forward the development of the six vaccines in its R&D pipeline. Aeras' 135 Maryland-based employees understand that the sooner effective products are available, the closer we are to dramatically reducing the 1.4 million lives lost to TB every year.

International Partnership for Microbicides Silver Spring ⌘ HIV/AIDS is the leading cause of death for women ages 15-44 worldwide. With support from USAID, NIH and other government agencies worldwide, IPM partners with pharmaceutical companies, researchers and non-governmental organizations to develop antiretroviral-based microbicides designed to safely and effectively protect women against HIV. In 2012, IPM and the NIH-funded Microbicide Trials Network will move a promising product into late-stage clinical trials.



ECONOMIC IMPACT

Where Does Maryland Rank?

SOURCE OF R&D FUNDING	INVESTMENT	STATE RANK
Federal Government	\$10,872,000,000	2
Industry	\$2,674,000,000	22
Universities	\$358,000,000	8
Non-Profit	\$156,000,000	5
Other*	\$71,000,000	16
Total	\$14,130,000,000	9

Source: National Science Foundation. *Other represents funding from state and local governments and funding for federally funded research and development centers from non-federal sources. Texas is ranked number one in this category.

- ▶ *Maryland ranks 19th in the nation in population but 9th among states in total R&D investment.*
- ▶ *Investment in R&D in Maryland is crucial to the growth of the state economy.*

Source: United for Medical Research; U.S. Census

Maryland Global Ties

- ▶ **The Johns Hopkins Center for Global Health** harnesses the expertise of the Bloomberg School of Public Health, the School of Medicine, and the School of Nursing to address HIV/AIDS, malaria, tuberculosis, malnutrition, hepatitis and other health threats, especially in developing countries. The Center develops sustainable solutions that transcend barriers preventing good health throughout the world.
- ▶ Bethesda's **Fogarty International Center** is a bridge between NIH and the greater global health community — facilitating global health research conducted by U.S. and international investigators, building partnerships between health research institutions around the world, and training the next generation of scientists. Source: Fogarty International Center
- ▶ HPV vaccine developer **Merck** is partnering with Maryland's QIAGEN to provide testing and vaccination to women and girls in the most resource-poor areas of the world. Source: Merck
- ▶ **The U.S. Army Center for Environmental Health Research** at Maryland's Ft. Detrick is developing technologies to provide safe drinking water to protect military personnel, which may also be used for the billion people who lack safe drinking water. Source: USACEHR; United Nations



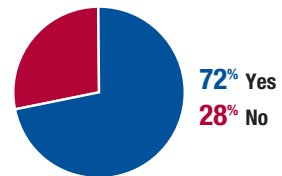
“Maryland’s life sciences industry continues to be one of our strongest economic drivers, creating high-paying jobs even in tough times and helping to feed, fuel and heal our planet with life-saving discoveries. Together, we can unlock our future potential, while offering moral leadership in an increasingly connected world.”

— Governor Martin O’Malley, 2011 Source: www.governor.maryland.gov

What Marylanders are saying

Marylanders are concerned about global health.

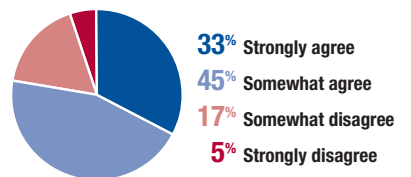
When you hear the term global health, do you think it is an issue about which Maryland residents should be concerned?



Source: Maryland Global Health Survey, October 2011, Charlton Research Company for Research!America

Marylanders believe U.S. might be losing its global competitive edge.

Do you agree or disagree with the following statement? “The U.S. is in danger of losing its global competitive edge in science, technology and innovation.”



Source: Maryland Global Health Survey, October 2011, Charlton Research Company for Research!America



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