



**The U.S. Military HIV Research Program (MHRP) is at the forefront of the battle against HIV to protect U.S. troops from infection and to reduce the global impact of the disease.**

Since its inception in 1986, MHRP has emerged as a world leader in HIV vaccine research, threat assessment and epidemiology, HIV diagnostics and cure research. The integration of prevention, care and treatment has helped MHRP build strong and trusting relationships within the communities where research is conducted, and provides an ethical framework to conduct HIV clinical research.

## RV144

In 2009, MHRP's landmark "Thai Study" was the first clinical trial to show a vaccine regimen was safe and modestly effective in preventing HIV transmission.

## HIV Vaccine Development

### **Demonstrated that an HIV Vaccine is Possible**

In 2009, The MHRP at the Walter Reed Army Institute of Research announced results of an Army-sponsored clinical trial in Thailand that demonstrated for the first time a modest ability to protect against HIV infection, reducing the number of infections by 31.2 percent. Since then, researchers have detailed clues to why the vaccine tested in RV 144 protected some volunteers. RV 144 and subsequent research has transformed the HIV

vaccine field and dominates the research framework to develop a successful HIV vaccine. A new efficacy study based on RV144 began in November 2016 in South Africa, led by the NIH.

### **Developing and Testing Next Generation Vaccine Candidates**

Recently MHRP and collaborators announced results from a Phase II HIV vaccine study (A004) of an HIV candidate vaccine for prevention using Ad26 prime with MVA and protein boost. Sponsored by J&J, A004 is the critical path study to down-select for a final regimen to advance to efficacy testing. The MVA vaccine component used in this study was manufactured and provided by MHRP in collaboration with NIAID/NIH.

MHRP is also studying these novel vaccines as a therapeutic approach aimed towards a functional cure for HIV.

## HIV Therapeutics and Cure Research

To better understand how the immune system responds during the acute (early) stage of HIV infection and explore genetic changes in the virus, MHRP launched two innovative cohort studies in Thailand and East Africa—RV217 and RV254.

Recently, MHRP began functional "cure" studies within these acute infection cohorts. These small studies are evaluating strategies aimed at inducing HIV remission (controlling the virus without the need for long term anti-retroviral treatment). Planned interventions include strategies to give HIV vaccines or antibody against HIV.



# HIV Research Success

# Soldier Health. World Health.

## Threat Assessment and Diagnostics

Our Threat Assessment team provides knowledge products that help inform public health policy in the military to decrease HIV infection and other related sexually-transmitted diseases.

MHRP's HIV Diagnostics and Reference Laboratory (HDRL) serves as the final DoD authority for HIV infection status in the Army and the military's Tri-Service Reference Laboratory. The diagnostics team is a leader in defining operational parameters for HIV and related disease diagnosis and also establishes critical laboratory monitoring parameters utilized by Military Health Care Providers for therapeutic management of a wide variety of infectious diseases.

## Emerging Infectious Diseases

MHRP's expertise and research infrastructure are leveraged to combat emerging infectious disease threats. Our researchers are assisting DoD's efforts by:

- Helping develop and test a leading Zika vaccine candidate
- Advancing multiple Ebola vaccine candidates
- Testing first-in-man MERS vaccine
- Initiating the Joint West Africa Research Group (JWARG)

## President's Emergency Plan for AIDS Relief (PEPFAR)

PEPFAR is the largest U.S. Government international health initiative in history, dedicated to providing integrated prevention, treatment and care in the developing world. The integration of PEPFAR-funded prevention, care and treatment at our research sites has helped MHRP build strong and trusting relationships within the communities where research is conducted and provides an ethical framework to conduct HIV clinical research.

MHRP leverages existing in-country technical expertise and partners with local researchers and health care providers in Africa to implement PEPFAR activities. Through PEPFAR, MHRP and local partners are building sustainable systems and empowering individuals, communities and nations to battle HIV in the part of the world hit hardest by this devastating disease.

Our PEPFAR programs engage both civilian and military populations in sub-Saharan Africa. MHRP PEPFAR programs have developed robust in-country relationships with CDC, USAID, Peace Corps, and other stakeholders and have built powerful partnerships with host-country civil society, government, academia, and non-governmental organizations.

## About MHRP

MHRP is centered at the Walter Reed Army Institute of Research (WRAIR). With main laboratories located in Silver Spring, Md., the program operates a global research network that includes research sites in Tanzania, Kenya, Nigeria, Uganda, Mozambique and Thailand. For more information, visit:

**[www.hivresearch.org](http://www.hivresearch.org) / [Facebook.com/hivresearch](https://www.facebook.com/hivresearch) / [@MHRPinfo](https://twitter.com/MHRPinfo)**

