Key Accomplishments

• Launched the first of its kind Ebola Phase II vaccine trial in Kisumu and Kericho in Spring 2017.
• Led Phase III clinical trial on first-ever efficacious malaria vaccine candidate, RTS,S with GSK.
• Conducted Zika virus surveillance in Kenyan athletes who participated in the 2016 Rio de Janeiro Olympics games in support of the host nation.
• Trained Kenya Ministry of Health and Kenya Defense Forces in Ebola Virus Disease and Viral Hemorrhagic Fever laboratory techniques.
• Conducted among the first and largest community based HIV cohort studies and completed research in high risk populations that provided critical insight to early HIV infection pathogenesis.

The USAMRD-K, known locally as MRD-K or the Walter Reed Project (WRP), is the only U.S. Department of Defense (DoD) infectious disease laboratory in sub-Saharan Africa. A biomedical research and development platform of the Walter Reed Army Institute of Research (WRAIR), MRD-K develops and tests improved means for predicting, detecting, preventing and treating infectious disease threats important to the U.S. military and host nation.

A History of Excellence

Dating back to 1969, WRAIR began conducting research in African sleeping sickness at the Kenya Trypanosomiasis Research Institute. The program later expanded to other infectious diseases, which led to the establishment of a partnership with the Kenya Medical Research Institute (KEMRI). The relationship between WRAIR and KEMRI has had a long history of accomplishments in combating increasingly complex diseases like Ebola, HIV, malaria, tuberculosis, and multi-drug resistant organisms, and developing increasingly complex tools like whole genome sequencing, molecular methods and rapid diagnostic tests.

Headquartered in Nairobi, Kenya, MRD-K operates two field locations in western Kenya with clinical research centers in Kisumu and Kericho, where surrounding communities experience high prevalence of HIV and malaria. Collaboration with these communities is essential to support and continue disease surveillance, training, research and response activities related to emerging infectious disease threats.

Leveraging Expertise to Combat Malaria

Most recently, MRD-K has supported the PMI roll-out of a national malaria quality assurance (QA) program, impacting 294 Kenyan health facilities with QA training and proficiency testing for 121 Kenyan QA officers. MRD-K has initiated the manufacture and development of a new portable reader for malaria parasites and blood count for use in austere environments in collaboration with Sight Diagnostics.

Leading the Fight Against HIV

In 2004, MRD-K and the U.S. Military HIV Research Program (MHRP) began providing services in Kericho supporting the President’s Emergency Plan for AIDS Relief (PEPFAR). PEPFAR services have since expanded throughout the South Rift Valley region. MRD-K also supports the Kenya Defence Forces (KDF), providing comprehensive HIV prevention, care, and treatment services. To date, MRD-K has surpassed 3.6 million Kenyans tested for HIV and 66,000 have started on life saving antiretroviral therapy (ART) at 283 civilian and 31 military supported sites.
Kondele Basic Science Laboratory is co-located with the Obama Children’s Hospital Research Wing and is the designated pneumococcal vaccine immunogenicity testing lab, supported by the Bill & Melinda Gates Foundation Program of Appropriate Technology and Health (PATH). The lab is currently evaluating two malaria diagnostic platforms for use in remote military environments.

Kombewa Clinical Trials Center is the premier clinical trials research center in East Africa with on-site clinical microbiology laboratory and a major site for Phase II and III vaccine and drug research.

Malaria Drug Resistance Laboratory is a comprehensive research and training center for malaria diagnosis, specializing in training on classical blood smear microscopy and rapid diagnostic tests. It is the focal point in East Africa for AFRICOM’s Africa Malaria Task Force (AMTF). The AMTF coordinates mil-to-mil information sharing events and engages 18 militaries across Africa.

Entomology Branch boasts a state of the art, Arthropod Containment Level II insectary, capable of malaria challenge studies in mosquitoes, and provides comprehensive entomological clinical trial support for malaria vaccine studies. The Entomology branch conducts country-wide surveillance of disease vector populations and is partnered with USDA, NASA, and MIDRP to develop sand fly population models based on satellite imagery for outbreaks of leishmaniasis.

Kericho Field Station is located in the historic tea plantation fields of Kenya and became the first College of American Pathologists (CAP) accredited lab in Kenya.

Working closely with the Military HIV Research Program, this field station was selected as a clinical research site for the NIH-funded AIDS Clinical Trials Group (ACTG) and for the International Maternal Pediatrics Adolescents AIDS Clinical Trials (IMPAACT) Network.

The field station is conducting acute HIV infection studies essential for vaccine development and has participated in studies focusing on HIV treatment and management of co-morbidities such as TB, fungal infections and Kaposi's sarcoma.

Microbiology Hub – Kericho (MHK) specializes in enteric pathogen surveillance as part of the Global Emerging Infectious System (GEIS) network, clinical diagnostic support to include emerging antibiotic resistance detection, outbreak response, and prospective cohort studies/ interventional trials for enteric diseases. MHK has been CAP-accredited since 2012 and has state-of-the-art diagnostic capabilities to support infectious disease studies in Kenya.