

Infectious Disease

Infectious diseases remain one of the greatest threats to mission capacity and operational readiness of U.S. military forces. The warfighter is routinely exposed to infectious pathogens through vector, vehicle and contact transmission routes.

In addition to posing a direct threat to Service Members, infectious diseases can impact international stability by weakening economies, military and police forces, and government and social institutions. HJF collaborates with the DoD on research to develop novel countermeasures for the detection, prevention and treatment of infectious diseases.

HJF is a global, not-for-profit organization authorized by the U.S. Congress to carry out medical research and education projects under cooperative arrangements with the Uniformed Services University of the Health Sciences (USU), serve as a focus for the interchange between military and civilian medical personnel, and encourage the participation of the medical, dental, nursing, veterinary, and other biomedical sciences in HJF's work for the mutual benefit of military and civilian medicine.

HJF executes a diverse biomedical research portfolio at military treatment facilities and Department of Defense (DoD) laboratories worldwide while facilitating collaborations with academic and industry partners.

HJF has become a key partner driving infectious diseases research success within the military by promoting private-public partnerships and providing the solutions to help DoD programs strengthen and diversify their research portfolios. The many programs HJF helped establish and continues to support exemplify HJF's expertise and outstanding service.

Surveillance and Epidemiology. The DoD leverages HJF's strength in program development to grow major surveillance programs with military focus. HJF provides staff to support the full lifecycle of disease surveillance including: field scientists to collect samples/vectors; bench scientists to analyze collected samples and develop novel diagnostics; database programmers to maintain and

store data; and epidemiologists to evaluate large datasets and elucidate risk factors and targets for prevention.

Preclinical Models. HJF technical experts develop, evaluate and refine preclinical models of infectious disease to screen candidate countermeasures. By bridging the gap from in vitro testing to clinical evaluation, these models provide a critical step in developing a countermeasures pipeline.

Vaccine Development. HJF has over 30 years of experience in vaccine development and knows that a diverse team of experts and facilities are necessary to meet the challenges posed by infectious threats. Accordingly, HJF partners with DoD, the National Institutes of Health and others to maintain an international clinical research infrastructure for vaccine testing and trans-disciplinary research endeavors targeting vaccine development around the world.

Therapeutics Development. Developing therapeutics against priority pathogens is critical to maintaining force readiness. HJF scientists work closely with the DoD to develop therapeutics against malaria, HIV, multi-drug resistant organisms and emerging and re-emerging viral diseases.

Site Assessment, Development and Capacity Building. HJF evaluates partnering hospitals and laboratories with comprehensive assessment tools to make informed site selection decisions and guide future study implementation planning. HJF builds and reinforces capacity by providing supplies, equipment, training, and scientific mentorship.

Clinical Trials. HJF has significant clinical trial experience, particularly in vaccine development—Phases I through IV, in the U.S. and overseas (e.g., Uganda, Tanzania, Nigeria and Thailand). In addition, HJF brings industry to the DoD to execute clinical trials throughout medical treatment facilities. HJF provides research physicians, nurses, clinical coordinators, phlebotomists, regulatory specialist and additional clinical research support staff to conduct clinical trials.



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Supported Programs

U.S. Military HIV Research Program

HJF has partnered with U.S. Military HIV Research Program (MHRP) at the Walter Reed Army Institute of Research (WRAIR) since 1988. Since then the program has become a world leader in HIV vaccine research, threat assessment and epidemiology, HIV diagnostics and cure research. HJF scientists work side-by-side with military researchers to conduct innovative basic, preclinical and clinical HIV research. HJF and MHRP engage strategic partnerships with key research institutions, host countries, and NGOs to develop an international network of clinical sites in Africa (currently including Kenya, Mozambique, Nigeria, Tanzania and Uganda), and Asia (Thailand). MHRP's established international clinical research infrastructure allows HJF and MHRP to rapidly respond to evolving military threats posed by emerging pathogens, including recent support for the development of vaccines for Ebola, Zika and MERS.

Infectious Disease Clinical Research Program

Infectious Disease Clinical Research Program (IDCRP) is a collaboration among HJF, USU and the National Institute of Allergy and Infectious Diseases (NIAID). IDCRP leverages a multi-site clinical research network to conduct clinical research around infectious disease in military populations. HJF provides program management, scientific and technical personnel, as well as administrative and logistical support coordinating all IDCRP performance sites. The program conducts studies that address the critical gaps in managing and preventing infectious diseases in the military.

Naval Medical Research Center Infectious Disease Directorate

HJF supports the Infectious Disease Directorate Naval Medical Research Center (NMRC) across their entire research portfolio including vaccine and therapeutic development for enteric diseases, malaria, emerging viruses, Rickettsia, and multi-drug resistant organisms. HJF's scientists, regulatory specialists and administrative staff support basic, preclinical and clinical research to enhance the countermeasure product pipeline.

Military Malaria Research Program

HJF provides technical, programmatic and administrative support for the Military Malaria Research Program at the WRAIR. HJF staff support both malaria vaccine and malaria experimental therapeutics research collaborations.

Austere environments Consortium for Enhanced Sepsis Outcomes

Military personnel are at particular risk of sepsis when deployed to austere regions with limited resources. HJF partners with the Navy to provide clinical and scientific expertise and programmatic and

coordination support for the Austere environments Consortium for Enhanced Sepsis Outcomes (ACESO). The program aims to improve the survival for patients with sepsis through early recognition, diagnosis and evidence-based clinical management.

The Joint West African Research Group

The Joint West African Research Group (JWARG) aims to build and strengthen infectious disease laboratory and clinical research capabilities in West Africa and contribute to the development of effective infectious diseases countermeasures including diagnostics, therapeutics and vaccines. JWARG is a collaboration between government, military, academic and non-governmental organizations in the U.S. and Africa, led by the ACESO, MHRP, Walter Reed Program-Nigeria (WRP-N) and the NMRC's Naval Medical Research Unit #3 Ghana Detachment (NAMRU-3G).

Operational Infectious Diseases Department, Naval Health Research Center

The Operational Infectious Diseases Directorate's Respiratory Disease Laboratory at the Naval Health Research Center functions as the Armed Forces Health Surveillance Branch, Global Emerging Infections Surveillance and Response System Navy hub. HJF scientists and research support staff process and bank samples in the department's laboratory, diagnosing and characterizing pathogens collected from clinical specimens during surveillance.

Infectious Disease Surveillance at the U.S. Army Medical Research Directorate, Kenya

HJF assists the U.S. Army Medical Research Directorate, Kenya to conduct bench science, surveillance and testing of infectious disease medical countermeasures and diagnostics. HJF supports surveillance on emerging and re-emerging infectious diseases, including HIV/AIDS, avian and pandemic influenza, and arboviral and antimicrobial-resistant infections. HJF works with the directorate in Kenya, Tanzania and Uganda, facilitating partnerships with a wide range of important stakeholders in each country.

Centers for Disease Control and Prevention

HJF supports the U.S. Centers for Disease Control and Prevention by providing medical research services, personnel and resources in sub-Saharan Africa. HJF supports CDC projects in global health security, laboratory capability and capacity building, and infectious disease research at the Kenya Medical Research Institute as well as other national and international partners in global health.