

Chemical, Biological & Radiological Defense



A vital element to national security, chemical, biological and radiological defense centers on improving early detection, preventing health consequences and protecting the health of our armed forces and the civilian world. HJF's efforts in this research area reach across the U.S. and around the world.

HJF is a 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 (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.

The organization 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.

Preclinical Studies

HJF technical experts develop, evaluate and refine preclinical models used to evaluate the impact of ionizing radiation and to screen candidate countermeasures. HJF scientists, veterinarians, veterinarian technicians and research assistants are trained in the safe and ethical use of animal for these models. By bridging the gap from in vitro testing to clinical evaluation, these models provide a critical step in developing a countermeasures pipeline.

Diagnostics

Detection of pathogens of military importance and national interest in human specimens is paramount in defending against biological agents. HJF provides clinical screening and supplemental confirmatory testing for pathogen detection. HJF staff process specimens and develop assays to detect infectious pathogens and emerging infectious diseases such as Ebola. HJF ensures strict quality control (QC) for every diagnostic assay conducted.

Vaccine Development

HJF has over 30 years of experience in vaccine development and 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.

Clinical Trials

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



THE HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE, INC.

6720A Rockledge Drive | Suite 100 | Bethesda, MD 20817 | 240-694-2000 | Fax: 240-694-3100

www.hjf.org



Naval Medical Research Center Biological Defense Research Directorate

HJF provides support to the Naval Medical Research Center's Biological Defense Research Directorate, which is working on biological research and field/lab detection of infectious disease. The center provides bio-defense and global surveillance with the assistance of HJF employees who work side by side with Navy researchers. The work takes place at Fort Detrick, Maryland.

Armed Forces Radiobiology Research Institute

The Armed Forces Radiobiology Research Institute, part of the Uniformed Services University, aims to preserve the health and performance of U.S. military personnel and to protect humankind through research that advances understanding of the effects of ionizing radiation. The institute also provides medical training and emergency response to manage incidents related to radiation exposure.

HJF assists the institute's research and development mission and helps:

- develop methods of rapidly assessing radiation exposure to assure appropriate medical treatment
- pursue new drugs that will prevent the life-threatening and health-degrading effects of ionizing radiation and move those drugs from discovery through the Food and Drug Administration approval process
- investigate the effects of radiation injury combined with other challenges such as trauma, disease and chemical exposures.

Biotechnology High Performance Computing Software Application Institute

While military researchers work to discover mitigation techniques and vaccine alternatives for biological threats, behind-the-scenes technology is being developed to enable those scientists to perform their work faster and with greater certainty.

Innovative computer technologies play an ever-increasing role in scientific discovery and protecting the warfighter, and the civilian population, against biological exposure. The U.S. Army Medical Research and Materiel Command has established the Biotechnology High Performance Computing Software Application Institute that develops software applications to support the Defense Department's biotechnology community and enhance the ability of the biological defense community to respond to new biological threats.