

FACT SHEET

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U.S. Naval Medical Research Unit No. 3 Cairo, Egypt



The US Naval Medical Research Unit No. 3 (NAMRU-3) established a presence in Egypt in 1942 when the US Typhus Commission placed a research laboratory staffed by American scientists and technicians in Cairo. The laboratory played a major role in averting a serious typhus outbreak during and following WWII. After the war, the Navy was invited by the Egyptian Government to continue collaborative studies of endemic tropical and subtropical diseases. In response, NAMRU-3 was formally established in 1946.

Today, the laboratory conducts research and surveillance to support military personnel deployed to Africa, the Middle East and Southwest Asia. The mission also includes the evaluation of vaccines, therapeutic agents, diagnostic assays and vector control measures.

NAMRU-3 is adjacent to the Abbassia Fever Hospital, the oldest and largest fever hospital in the Middle East. NAMRU-3 has modern research laboratories, a medical research library and is the only laboratory in Africa with an animal facility accredited by the American Association for Accreditation of Laboratory Animal Care (AAALAC). Field and hospital study sites are located throughout Egypt. A malaria field site is located in the upper east region of northern Ghana.

NAMRU-3 works closely with the Egyptian Ministry of Health and Population, the US National Institutes of Health, the World Health Organization, the US Agency for International Development and the US Centers for Disease Control and Prevention. NAMRU-3 has been a WHO Collaborating Center for AIDS since 1987.

Research Areas

Emerging Infectious Diseases

- Identify, characterize and evaluate risk factors for the most important infectious disease threats in the region and strengthen infectious disease surveillance and response networks in the region.

Virology

- Describe the epidemiology of viral pathogens and to genetically and antigenically characterize virus isolates and evaluate vaccines and diagnostic assays.

Entomology

- Identify arthropod vectors, detect pathogens in vectors, evaluate control measures and assess vector borne disease risks in the region.

Enteric Diseases

- Describe the epidemiology of enteric pathogens in the region and evaluate vaccines, therapeutic agents and diagnostic assays.

Examples of Accomplishments

- Conducted three trials of a killed, oral vaccine against enterotoxigenic *E. coli* (ETEC) showing the safety and immune potency of this vaccine.
- During a three-year period, over 300 ETEC, 100 *Shigella* and 200 *Campylobacter* strains were isolated and tested for antibiotic resistance. Emergence of quinolone resistance was noted for *Campylobacter*, but not for *Shigella* or ETEC.
- Determine HEV is a significant cause of acute hepatitis and responsible for 27% of the community acquired hepatitis in Egypt.
- In 2000, NAMRU-3 participated in a number of reviews and working groups focusing on a communicable disease surveillance program in Egypt and published a set of communicable disease surveillance guidelines based on prioritized diseases.
- In 1999, NAMRU-3 implemented surveillance for influenza in Egypt resulting in the first-ever Egyptian MOHP “Influenza Surveillance Report”.
- WHO collaborating center for AIDS, Eastern Mediterranean Region.
- Performed genotyping of HIV-1 isolates and identified Clade B in Egypt, Clade A in Syria and Clades C and D in Djibouti.
- NAMRU-3 is active in disease outbreak investigations in the region. In the last two years NAMRU-3 has contributed to six major outbreak investigations.
- Three potential repellent candidates to replace DEET were screened against mosquitoes, sand flies and soft ticks.
- Completed a three-year cohort study on surveillance for diarrhea. From the analysis of data, precise estimates of age-specific incidence of all diarrhea and diarrhea due to specific bacterial pathogens were determined.
- Evaluation of Etoquine for the chemoprophylaxis of *P. falciparum* malaria.

Examples of Operational Support

- NAMRU-3 is a medical research facility. However, the talents and skills that many officers and enlisted personnel possess can be used to support forward-deployed operations. Examples include the Navy Forward Lab during Desert Shield/Storm, Operation Restore Hope, and Famine Relief in Madagascar.
- Investigated high rate of acute gastroenteritis (AGE) among active duty service personnel at Incirlik Air Force Base, Turkey.
- Pioneer in preparing a “white paper” on the global surveillance of emerging infectious diseases, which was later used as a basis for the Emerging Infectious Diseases Surveillance and Response Program developed by DoD.
- Provided support for Operation Bright Star since 1983, identifying bacterial and parasitic pathogens and determining antibiotic susceptibilities of clinical isolates.



Visit NAMRU-3 website at <http://www.nmrc.navy.mil>

