Hemex Health developing malaria detector with Navy researchers in Peru

Through cooperative research with industry, the U.S. Navy is making significant advances in disease diagnosis.

Hemex Health, a fast-growing medical diagnostics company in Portland, Oregon, has signed a cooperative research and development agreement with the Naval Medical Research Unit 6 in Peru.

Hemex is in final development stages of a portable, battery-operated Magneto-Optical Detection (MOD) device that rapidly detects the presence of hemozoin in a single drop of blood, a malaria parasite byproduct of hemoglobin digestion.

Under the agreement, announced Monday, malaria experts at the Navy’s medical research laboratory in Lima will work with the company on field testing the device to determine specificity and sensitivity in malaria patients and compare this to the current standard of care. Together they will work on translating this technology into a low-cost, rugged, and operationally ready device that can be utilized in all malaria-endemic regions.
At about $1 and one minute per test, the MOD enables efficient diagnostic testing of malaria in the field – a cost reduction that could save anti-malaria organizations as much as $1 billion per year.

“It’s important for countries plagued by malaria to identify everyone who is infected,” said Hemex CEO Patti White. “Our diagnostics are fast, affordable, and rugged enough to take into the most challenging environments, which the Navy knows a lot about.”

The U.S. Naval Medical Research Unit 6 conducts research on and surveillance of infectious diseases that are of military or public health significance in South America, including malaria and dengue fever.

“Malaria threatens public health in more than 100 countries and significantly impacts military readiness and operational capabilities, causing greater loss of manpower in tropical regions than combat-related injuries,” said Navy Capt. Guillermo Pimentel, commanding officer of the unit. “There is a clear need for a quick, affordable device to assist physicians in
ensuring that millions of people receive lifesaving antimalarial medications, including service members who are deployed in the region.”

The Magneto-Optical Device detects all strains of malaria at low concentrations in under one minute. (Image courtesy of Hemex Health)

TechLink, the Department of Defense’s national partnership intermediary for technology transfer, helped Hemex develop the research agreement through the Naval Medical Research Center’s Office of Partnerships and Business Development.

“Malaria is the deadliest disease in children worldwide. Hundreds of thousands of kids are dying every year,” said Dr. Eric Hanson, TechLink’s specialist in medical research partnerships. “We’ve got to do everything we can to stop it.”

By Troy Carter
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