

Researchers link up to develop dengue test

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University of Queensland researchers will team with Alere Australia to develop a cheap, simple test for diagnosing dengue fever in its early stages.

Professor Matt Cooper from UQ's Institute for Molecular Bioscience (IMB) will lead the project, which has received \$225,000 from the Australian Research Council's Linkage program, which links university researchers with industry partners.

"Dengue virus is re-emerging as a global health problem," Professor Cooper said. "Over 2.5 billion people in 100 countries are at risk. Here in Australia, outbreaks in North Queensland have been an annual event since 2004, with the 2009 outbreak the largest for 50 years."

"Early, accurate detection is vital both for limiting transmission and treating the patient so the disease doesn't progress to dengue haemorrhagic fever. Globally, only about three percent of people infected with the virus are currently being diagnosed accurately."

The researchers will map key dengue proteins to enable rapid diagnosis of a dengue infection. The team will then aim to design and develop a low-cost device that will be used to diagnose dengue in the field.

"This will be of major benefit in controlling a disease that predominantly affects developing countries where ready access to high-level medical facilities is limited," Professor Cooper said.

"The proposed device would remove subjectivity from the interpretation of the test results and provide accurate early diagnoses, which will lead to improved strategic containment of outbreaks and better treatments to avoid serious secondary dengue infections."

Alere Australia is considered the world leader in dengue diagnostics in terms of market share. The company is based in Queensland and employs 105 people in sales, manufacturing and research.

The Institute for Molecular Bioscience is one of Australia's leading research institutes. The major focus of IMB research is to understand the information contained in the genes, proteins and small molecules of animals and plants and thereby to improve human health through the development of new pharmaceuticals, therapies and diagnostics.

Professor Cooper joined the IMB in 2009 after receiving a \$4 million Australia Fellowship to conduct research into novel antibiotics to combat drug-resistant pathogens. He is an internationally recognised expert in the field of diagnostic device and biosensor development.

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