Solution to dengue fever

In a positive step towards controlling the global burden of dengue fever, the Eliminate Dengue project, pioneered by an Australian led research team from the University of Queensland has received regulatory approval to commence field trials from January 2011.

The project has secured regulatory approval from the Federal Government’s Australian Pesticides and Veterinary Medicines Authority (APVMA), giving the green light for trials to begin in the Cairns suburbs of Gordonvale and Yorkeys Knob.

The Eliminate Dengue project is an international collaboration involving research institutions in Australia, Vietnam, Thailand, USA and Brazil. The project funded by the Foundation for the National Institutes of Health as part of the Bill & Melinda Gates Foundation’s ‘Grand Challenges in Global Health’ initiative is responsible for the development of a new biological approach for the control of dengue fever.

Dengue fever is a mosquito-borne viral disease that occurs in over 100 countries worldwide.

The World Health Organisation estimates that each year there are 50-100 million cases of dengue fever globally. Over 1,000 cases of dengue fever were confirmed in Far North Queensland in the 2008-09 wet seasons and the potential for dengue to reach Australia is likely to rise with the increase of the disease in the Asia Pacific region as a result of urbanisation and growth in international travel.

Project leader, Professor Scott O’Neill from the University of Queensland comments, “We’re delighted with the approval which follows years of comprehensive testing and risk analysis from the CSIRO and the APVMA. This approval is a significant milestone for everyone who has been working on the project and represents an important step in the search for a self-sustaining solution to dengue fever,” he said.

“The biological approach will involve introducing strains of a bacterium called Wolbachia into the mosquito population, blocking virus transmission. Wolbachia occurs naturally in up to 70 per cent of all insect species and our studies have satisfied the government’s requirements demonstrating safety to people and the environment.”

“The project is the first of its kind in the search for a permanent solution to dengue fever and is unique in that the method will be self-sustaining once established,” Professor O’Neill said.

The Eliminate Dengue project is a long term approach, which if successful, will benefit an estimated 2.5 billion people currently living in dengue transmission areas.

The objective of the 2011 field trial is to determine how well the Wolbachia method establishes within the wild mosquito population.

ERADICATION: Insect repellent is an easy measure to avoid being bitten by mosquitoes, though it is hoped the Eliminate Dengue project will control dengue fever in the future.