



## LOCAL RESEARCHERS TEST ASTHMA DRUG ON DENGUE PATIENTS

● To treat dengue symptoms more effectively and stop the disease from worsening, researchers have launched clinical trials of an asthma drug on dengue patients, which had showed promising results when tested on mice.

The study, conducted by the National University of Singapore (NUS) and Duke-NUS Graduate Medical School Singapore (Duke-NUS) in collaboration with National University Hospital and Singapore General Hospital, will run for two years. Researchers are aiming for 110 study participants.

Ketotifen, used to treat asthma, can block mast cells, a type of immune cell. Assistant Professor Ashley St John from Duke-NUS' Emerging Infectious Diseases Programme and her team had

found that mast cells react strongly to dengue virus infection and release pro-inflammatory proteins, which can cause vascular damage and result in the loss of fluids from blood into other parts of the body, such as the lining of the lungs. If unchecked, this can lead to dengue haemorrhagic fever or dengue with complications.

Speaking at a media briefing on the trial yesterday, Asst Prof St John said if Ketotifen can block mast-cell activation in dengue as it does for asthma patients, it may be able to prevent the more severe forms of dengue. Patients with the most severe forms of dengue have very high levels of mast-cell activation, she added.

Currently, there is no approved medication for preventing vascular

leakage. Outpatient treatment for dengue patients comprises fever and pain relief, and advice on fluid intake. Those found to have vascular leakage or other complications may be admitted for observation, or given fluids intravenously.

Professor Paul Tambyah from the Department of Medicine at the NUS Yong Loo Lin School of Medicine, who is leading the clinical trial, said Ketotifen has worked well so far to prevent vascular leakage in mice.

So far, seven patients have participated in the clinical trial. While the researchers will monitor them for side effects, it is noteworthy that Ketotifen is an approved safe drug, said Asst Prof St John. **CHARLOTTE LAI**