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Malaria drug may cure asthma: Research

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Singapore: National University of Singapore has demonstrated effectiveness of artesunate, a common herbal-based anti-malarial drug, in controlling asthma.

Driven by team of Associate Professor Fred Wong from department of Pharmacology at NUS Yong Loo Lin School of Medicine, together with Dr Eugene Ho Wanxing, a recent PhD graduate from Saw Swee Hock School of Public Health at NUS, revealed that artesunate is able to suppress airway inflammation and produce an array of anti-inflammatory effects similar to those by dexamethasone, the most potent steroid currently available, and with less side effects.

To address the global unmet demand for better therapeutics to control allergic asthma, Dr Ho explored the therapeutic values of artesunate, which is herbal-based, as an alternative drug candidate. This study was part of Dr Ho's final-year project when he was pursuing a Bachelor of Science in Life Sciences at NUS. His initial findings demonstrated that artesunate possessed promising anti-inflammatory potential.

Dr Ho was recognised by the Singapore-MIT Alliance (SMA) in 2010 for his novel discovery, and he was awarded the SMA Graduate Fellowship for his PhD studies at NUS.

For his postgraduate studies, Dr Ho built upon his findings to better understand the therapeutic properties and molecular mechanisms of artesunate under the supervision of Assoc Prof Fred Wong.

The NUS team studied the therapeutic effects of artesunate against oxidative stress and oxidative lung damage which are major inflammatory events that contribute to the severity of asthma attacks. They found that artesunate could better prevent

oxidative lung damage, a major molecular inflammatory event in asthmatic lungs, than clinically-used corticosteroid, dexamethasone.