

Tues, 18 July 2017 | 3pm | DBS Conference Room 1

Hosted by A/P K Swaminathan

Novel DNA vaccine induces protective immediate and persistent immunity against ZIKA virus



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To date, there have been several million infections by the ZIKA virus, a mosquito transmitted emerging pathogen. It is becoming a major concern for public health authorities after it was connected, in Brazil, with a massive increase of microcephaly in babies. The World Health Organization declared ZIKA a public health emergency, and has altered the scientific community's view of the mosquito-borne virus. Currently, there are no licensed vaccines or therapeutics available for Zika virus or its associated disease pathologies. The previously stated epidemiological findings, relating to ZIKA infection and disease, underscore the importance of research to determine potential prophylactic and therapeutic strategies against this emerging virus.

This talk addresses recent successes in the development of novel DNA vaccines platform with improved immune responses in a pathogenic mouse and in NHP challenge model supports the importance of immune responses targeting ZIKV infection and suggests that additional research on this vaccine approach may have relevance for ZIKV control in humans. This represents the first ZIKV vaccine approved for human trials.