**Seroprevalence of Zika Virus in Malaysia**

*Sumarni Mohd Ghazali, MMEdSciPH¹, Ahmad Faudzi Yusoff, MPH², Kee Chee Cheong, MSc³, Ahmed Syahmi Syafiq Md Zamri, MBBCh², Tharmarajah Nagalingam, MPH¹, Nur Hafizah Md Iderus, BSc¹, Qistina Ruslan, BSc¹, Tg Rogayah Tg Abd Rashid, MSc¹, Ravindran Thayan, PhD³*

¹Institute for Medical Research, National Institutes of Health, Shah Alam, Malaysia, ²Sector for Biostatistics & Data Repository, National Institutes of Health (NIH), Shah Alam, Selangor, Malaysia, ³Biomedical Museum Unit, Institute for Medical Research, Kuala Lumpur, Malaysia

**ABSTRACT**

**Introduction:** Zika disease is an emerging vector-borne disease in many parts of the world. First isolated in Malaysia in 1966, the seroprevalence and risk factors of ZIKV in Malaysia are unknown. **Methods:** We conducted a population-based serosurvey in three states in Malaysia, namely Kedah, Sabah and Johor, between April to July 2017. Blood samples were taken from 1,261 respondents in Johor (n=388), Sabah (n=409) and Kedah (n=464) were tested for the presence of antibodies against Zika virus (ZIKV) by anti-ZIKV IgM and IgG ELISA. Seroprevalence of ZIKV was estimated based on seropositivity of either anti-ZIKV IgM or IgG or both. Respondents were interviewed using a structured questionnaire and multiple logistic regression analysis was used to identify risk factors for ZIKV seropositivity. **Results:** Kedah had the highest ZIKV seroprevalence (33.9%), followed by Sabah (23.6%) and Johor (12.7%). Overall seroprevalence of ZIKV was estimated at 24.1%. Age (higher likelihood of seropositivity among age 18 years and above) and ethnicity (higher among 'Others' ethnic group) were significantly associated with ZIKV seropositivity, whereas self-reported history of dengue fever, wearing long trousers or sleeves and having screened windows at home were associated with less risk of ZIKV seropositivity. **Conclusion:** Our findings suggest that ZIKV is endemic and co-circulating with other arboviruses in Malaysia.