SCREENING OF FLAVIVIRUS IN MOSQUITOES IN PENINSULAR MALAYSIA

[1]TIJANI KAZEEM ADELEKE, [1,3*] ABD RAHAMAN YASMIN, [1]AMIR MUHAMMAD EHSAN, [1]NATASHA JAFAR ALI, [2]SITI SURI ARSHAD, [2,3]KAMAL FARINA MUSTAFFA, [1]SYAFIQAH ISHAK, [2,3] SAULOL HAMID NUR FAZILA, [4]HASSAN SHARIFAH SYED, [5]YANNICK SIMONIN & [5]SARA SALINAS

[1]Department of Veterinary Laboratory Diagnosis,
[2]Department of Veterinary Pathology and Microbiology, Faculty of Veterinary Medicine,
[3]Laboratory of Vaccines and Biomolecules, Institute of Bioscience, Universiti Putra Malaysia, 43400, Serdang, Selangor, Malaysia
[4]Jeffrey Cheah School of Medicine and Health Sciences, Monash University Malaysia, Jalan Lagoon Selatan, 47500 Bandar Sunway
Selangor, Malaysia
[5]Pathogenesis and Control of Chronic Infections, Inserm, Université de Montpellier, Etablissement Français du Sang, 34394 Montpellier, France

*Corresponding author: noryasmin@upm.edu.my

Abstract

Flavivirus such as West Nile virus (WNV) and Japanese Encephalitis virus (JEV) are primarily transmitted by mosquitoes, and the infection causes a significant public health concern particularly in Malaysia. Both virus infection is mainly maintained and amplified in reservoir hosts which are wild birds. Mosquitoes from migratory bird areas were collected using CDC light traps and were screened for WNV and JEV using RT-PCR. These localities were selected based on their association with JEV reservoirs and dynamics of transmission. Results indicated WNV was detected but no evidence of JEV in any of the collected mosquitoes. This study highlights the need for continued surveillance and further investigation into the epidemiological and ecological factors influencing Flavivirus transmission dynamics in Malaysia.

Keywords: Flavivirus, West Nile virus, Japanese Encephalitis virus, Malaysia, mosquitoes.