

Prevalence of West Nile Virus Antibody in Captive Bird Populations in Selected Areas in Selangor, Malaysia

**Mohamad Naguib Rais,¹ Abdul Rahman Omar,² Jalila Abu
& ³Mohammed Hussni Omar**

¹Department of Veterinary Pathology and Microbiology

²Department of Veterinary Clinical Studies

Faculty of Veterinary Medicine, Universiti Putra Malaysia

³College of Veterinary Medicine, Cornell University, Ithaca, N.Y. USA

Abstract

West Nile Virus (WNV) infection is a zoonotic emerging disease caused by RNA virus genus of *Flavivirus*. WNV virus is maintain in the environment via cyclic transmission with mosquito particularly *Culex* spp. served as a vector, birds as amplifying host and human or mammals as dead-end host. Currently, no studies have been carried out to determine the prevalence of WNV antibody in captive bird populations in Malaysia. This study was conducted because there are many risk factors that can contribute to the presence of WNV in Malaysia such as high biodiversity including migratory birds, presence of vector and importation of the birds among pet owners and zoological collections. This cross-sectional study was conducted in four selected areas in Selangor which were National Zoo, Sunway's Wildlife Park, Tanjung Karang and Faculty of Veterinary Medicine, UPM. Sixty-eight serum samples from 17 different species of captive birds were collected via venipuncture at the wing vein. Then, these sera were tested using ID Screen® West Nile Competition (Competitive ELISA) against anti-protein E antibody. Three samples showed seroconversion and each positive sample was from different species and different places. The overall prevalence in this study was 4.41%. The prevalence based on locations were National Zoo (5.88%), Sunway's Wildlife Park (6.17%) and, Tanjung Karang (9.09%). Thus, this preliminary study confirmed the exposure to WNV among captive bird populations in selected areas in Selangor.

Keywords: WNV, competitive ELISA, antibody, seroconversion, seropositive, prevalence