NEUTRALIZATION TITERS AGAINST INFLUENZA A (H3N2) AND INFLUENZA B VIRUSES AMONG A NON-VACCINATED POPULATION FROM THAILAND

Napasawan Boonsathorn¹, Yuta Kanai², Jiraporn Punjumpa¹, Guirong Bai², Malinee Chittaganpitch³, Udom Petphuwadee⁴, Wipawee Jampangern², Pathom Sawanpanyalert³, Kazuyoshi Ikuta^{2, 5} and Chai Teerasut⁴

¹Medical Biotechnology Center, Department of Medical Sciences, Ministry of Public Health, Nonthaburi, ²Section of Viral Infections, Thailand-Japan Research Collaboration Center on Emerging and Re-emerging Infections (RCC-ERI), Nonthaburi; ³National Institute of Health, Department of Medical Sciences, Nonthaburi; ⁴Si Sa Ket Provincial Hospital, Office of Permanent Secretary, Ministry of Public Health, Si Sa Ket, Thailand; ⁵Department of Virology, Research Institute for Microbial Diseases, Osaka University, Osaka, Japan

Abstract. Influenza A and B viruses are viral respiratory pathogens that can cause severe infections among birds and mammals. Neutralization assays using human sera are useful to evaluate the risk of circulating viruses to humans. In this study, 359 serum samples from healthy Thai volunteers, who had not been vaccinated against influenza for at least five years, were investigated by microneutralization (MN) assays against influenza A H3N2 and influenza B viruses in 2009. There was no significant difference in neutralization activities against 2006 and 2008 isolates of influenza A H3N2 viruses. However, neutralization titers to influenza B viruses among 2008 isolates were quite low. The results indicate the non-vaccinated study population had some neutralizing antibodies against influenza A H3N2 but not against influenza B viruses.

Keywords: influenza A virus, influenza B virus, neutralization titer, healthy Thais

Correspondence: Kazuyoshi Ikuta, Department of Virology, Research Institute for Microbial Diseases, Osaka University, Yamada-oka 3-1, Suita City, Osaka 565-0871, Japan.

Tel: +81 6 6879 8307; Fax: +81 6 6879 8310

E-mail: ikuta@biken.osaka-u.ac.jp

Chai Teerasut, Si Sa Ket Hospital, No.859 Kasikam road, Mueang Tai Sub-district, Mueang, Si Sa Ket 33000, Thailand.

Tel: +66 (0) 45 611 434; Fax: +66 (0) 45 612 502

E-mail: mandy_fab@hotmail.com