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**Complete genome sequence analysis of the bluetongue virus serotype 3 in South Korea****Hyun Jeong Kim**

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Bluetongue Virus (BTV), a member of the genus *Orbivirus* in the family Reoviridae, contains ten segments (S1 to S10) of double-stranded RNA (dsRNA). To date, 27 BTV serotypes have been characterized and two major geographical groups (eastern and western topotypes) of BTV have been circulating globally. In Korea, BTV-1/KorL83915 strain was first isolated in 2012 when a pilot study was carried out to investigate the BTV status of Korea. Subsequently, from 2013 to 2014, 6,542 blood samples that collected from cattle (5,447) and goat (1,095) were obtained from 1,485 farms across 10 provinces. In this study, the BTV strain was newly isolated and different from the serotype that was reported in a previous study. Based on the nucleotide sequence and phylogenetic analysis, the VP2 gene of the virus was characterized as serotype 3 and the gene belongs to nucleotype B and eastern topotype. According to the phylogenetic study, the VP2 and VP5 genes of the Korean BTV-3 isolate was closely related to the Japanese BTV-3 and four genes (S1, S3, S5 and S7) were with the Taiwanese BTV-12 strain. The remaining S4, S8, S9 and S10 segments were clustered with Chinese BTV-16, BTV-4 and BTV-1 and Taiwanese BTV-2, respectively. Although it is unclear how the virus had been formed and introduced into South Korea, the virus might be emerged in Asian countries through vigorous reassortment and movements of infected hosts and/or biological vectors have to be considered. For better understanding of the virus ecology and transmission mechanism, international cooperation and more extensive monitoring on hosts as well as on vectors should be needed.

**Biography**

Hyun Jeong Kim has completed her PhD from College of Veterinary Medicine, Chonnam National University in South Korea. She is the Veterinary Researcher of Foreign Animal Disease Research Division at Animal and Plant Quarantine Agency (APQA). She has published more than 23 papers on bovine and porcine pathology, epidemiology, molecular biology and anti-microbe strategy in reputed journals.

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