**GENOTYPE CHARACTERIZATION OF NEWCASTLE DISEASE VIRUS ISOLATED FROM COMMERCIAL CHICKEN FLOCKS IN WEST JAVA, INDONESIA**

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**Abstract**

Newcastle disease is a highly contagious disease of poultry worldwide. Despite vaccination, Newcastle disease outbreaks in commercial chicken flocks in Indonesia have been reported regularly. The genetic diversity of Newcastle disease virus increases the possibility of diagnostic failures, resulting in unidentified infections. Our study aims to determine the genotype of viruses and genetic relation among Indonesian Newcastle disease virus published on the GeneBank. Four Indonesian Newcastle disease viruses were obtained from vaccinated flocks in 2011, 2014, 2015 in West Java Indonesia. These viruses, which belong to the repository of Faculty of Veterinary Medicine, Bogor Agricultural University, were used in this study. Two of these Newcastle disease viruses belong to virulent strain and the other two belong to avirulent strain. Phylogenetic analysis of the F gene revealed that Newcastle disease virus isolated from Bogor in 2011 and Newcastle disease virus isolated from Gunung Sindur in 2014 belong to genotype VII sub-genotype (h) and (i); whilst Newcastle disease virus isolated from Cianjur in 2015 and Newcastle disease virus isolated from Bogor in 2015 belong to genotype II. The virulent Newcastle disease virus were clustered in the same genotype and were closely related to earlier Indonesia Newcastle disease virus isolated in year 2007, 2009, and 2010. The result of current study shows that Newcastle disease virus new sub-genotype VIIh and VIIi currently predominantly circulating in commercial chicken farm in West Java Indonesia have high similarity with Newcastle disease viruses isolated during 2007 and 2010 in Indonesia.

**Keywords:** phylogenetic analysis, sub-genotype, virulent strain, avirulent strain