

The First Whole CPV Genome and Accidentally Found CPV-2c Strain in Turkey

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Abstract

Although there have been a number of studies on the canine parvovirus VP2 region in Turkey, there is no study was made for the complete genome sequence. Therefore, our study aimed to present the first whole-genome sequence of canine parvovirus in Turkey, to perform molecular characterization and compare with other strains in the World. Our results demonstrate that 45 nucleotide differences exist, comparing with the reference genome. 10 of these mutations cause amino acid differentiation in the VP2 region of the virus, which plays an important role in infection. Moreover, one of these amino acid differences seen in the VP2 region is unique in Turkey. After the construction of the phylogenetic tree, the present strain observed in Turkey is not closely related to any of the strains in the world, nevertheless, specifically for the VP2 region, it is related to the other sequences sequenced in previous studies in Turkey. According to our alignment results, we accidentally found, which is known false the first entrance of CPV-2c strain in Turkey. Our data analysis expresses that the CPV-2c strain was first seen in 2013 in Turkey, however, data submitted to NCBI was not published as an article. The present results allow to understand and evaluate better the canine parvovirus strains in Turkey and also paves the way for more research.

Keywords—Canine parvovirus, Complete Genome, Sequence, Turkey

Professional Biography 1

Mehmet Cevat Temizkan has completed the Faculty of Veterinary Medicine at the age of 23 from Afyon Kocatepe University and completed his PhD at the age of 28 years from Ankara University on Veterinary Genetics. He studied one year in Poland with Erasmus programme in year 2011/2012 and worked on neurogenetics in Germany with YITAK Scholarship during

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Professional Biography 2

Secil Sevinc Temizkan has completed the Faculty of Veterinary Medicine at the age of 24 from Selcuk University and completed his PhD at the age of 30 years from Ankara University on Veterinary Virology. She studied six months in Poland with Erasmus programme in year 2011/2012. She awarded with the best poster award by the 9th EuroSciCon Conference on Microbiology And Virology in 2019, Athens. Currently, she is the working in Ankara University's laboratories for her scientific researches and giving lectures in the Faculty of Veterinary Medicine in the Yozgat Bozok University. She is now working on viral genetics and immunogenetics.

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