

## عنوان مقاله:

A study on bioinformatical properties of gene 5a among different strains of infectious bronchitis virus

## محل انتشار:

بیستمین کنگره ملی و هشتمین کنگره بین‌المللی زیست‌شناسی ایران (سال: 1397)

تعداد صفحات اصل مقاله: 1

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## خلاصه مقاله:

Infectious Bronchitis (IB) is a highly contagious viral respiratory disease of poultry characterized by tracheitis, coughing, and sneezing. It affects the quality and quantity of meat and egg production in poultry worldwide. Controlling of the disease is based on regular vaccination against homologous strains. The identification and molecular analysis of circulating strains could be very helpful in poultry farms. IBV (Infectious Bronchitis Virus), the causative agent of IB and a member of the coronaviridae family, has an RNA genome with the length of about 27.6 kb. The genome of the virus encodes four structural proteins (S, E, M, N) and two nonstructural proteins (3 and 5). Gene 5 has been explained as an important factor in the pathogenesis of the virus. In this study, 5a gene nucleotide sequences of different IBV reference strains were obtained from GeneBank and molecular analysis of the strains was analyzed using Bioedit and Mega7 software programs bioinformatically. Based on sequence similarity analysis, the rate of relatedness of the strain pairs was between 81%- 100%. Strains from US, Netherland, and China had 100% nucleotide similarity and some strains of China showed the lowest similarity with Taiwan IBV strains. Results of phylogenetic tree revealed that some Asian strains were clustered with Australian strains together while some other Asians were grouped with American strains. Clustering of IBV strains in different groups regardless of their geographical regions, can confirm the possibility of important functional properties for gene 5a

## کلمات کلیدی:

Infectious bronchitis virus, Poultry, Bioinformatics, Phylogenetic tree, Gene 5a

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/850332>

