

## عنوان مقاله:

Study on antibiotic resistance and phylogenetic comparison of avian-pathogenic Escherichia coli (APEC) and uropathogenic Escherichia coli (UPEC) isolates

## محل انتشار:

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## خلاصه مقاله:

Avian pathogenic Escherichia coli (APEC) and uropathogenic E. coli (UPEC) can cause vast infections in humans and poultry. The present study was conducted to compare the isolates of the APEC and UPEC pathotypes on the basis phenotypic and genotypic features of antibiotic resistance and phylogenetic differences. Total number of 70 identified E. coli strains, including 35 APEC and 35 UPEC isolates, were isolated from avian colibacillosis and human urinary tract infection (UTI), and were subjected to the antimicrobial susceptibility testing, polymerase chain reaction (PCR) detection of the resistance genes, phylogenetic grouping and DNA fingerprinting with enterobacterial repetitive intergenic consensus PCR (ERIC - PCR) to survey the variability of the isolates. The most resistance rates among all E. coli isolates were, respectively, obtained for Ampicillin (84.20%) and sulfamethoxazole-trimethoprim (65.70%). The APEC and UPEC isolates showed the most susceptibility to imipenem and gentamycin, respectively. Among 70 APEC and UPEC isolates 34.20%, 32.80%, 20.00%, and 12.80% belonged to the A, B2, D, and B1 phylogenetic groups, respectively. Analysis of the DNA fingerprinting phylogenetic tree showed 10 specific clusters of APEC and UPEC isolates. According to the results, the most effective antibiotics and the phenotypic and genotypic predominant resistance patterns of the APEC and UPEC isolates were different. Moreover, APECs and UPECs showed various dominant phylogenetic groups. With all descriptions, the APEC isolates still are potential candidates for carrying important resistance genes and can be one of the possible strains related to human infections.

## کلمات کلیدی:

E. coli pathotypes, ERIC-PCR, Resistance genes

## لینک ثابت مقاله در پایگاه سیویلیکا:

