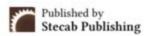


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Research Article

Assessment of Virulence Gene Expression in Entamoeba Strains from Basrah, Southern Iraq

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About Article

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ABSTRACT

Entamoeba histolytica is the primary protozoan parasite causing amoebiasis, a disease characterized by diarrhea and dysentery. Entamoeba histolytica trophozoites develop a virulent phenotype that leads to intestinal tissue invasion and the onset of amoebiasis symptoms. Quantitative real-time PCR (qRT-PCR) was performed to quantify the expression levels of selected virulence genes cysteine protease (CP), amoebapore B (AP), and Gal/GalNAc lectin (GAL) in Entamoeba strains. Our findings showed that assessing the expression of three key virulence genes cysteine protease (CP), amoebapore (AP), and Gal/GalNAc lectin (GAL) in Entamoeba strains. The results revealed low CP expression across all strains, suggesting reduced invasive ability. High AP expression was observed in DM24, DM33 for E. moshkovskii strains, indicating strong cytolytic potential, while E. histolytica DM5 showed lower AP levels. GAL expression was elevated in E. histolytica DM1 and DM5 and E. moshkovskii DM33, pointing to effective adhesion, but was significantly lower in E. moshkovskii DM24, indicating impaired virulence. Overall, the study highlights strain-specific differences in virulence gene expression among Entamoeba strains. The study focused on evaluating the expression of key virulence genes in Entamoeba strains from Basrah, highlighting strainspecific differences that influence their pathogenicity. By analyzing genes involved in tissue invasion, cytolysis, and adhesion, the research provides insights into the varying disease-causing potential of different

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