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Evaluation of the prevalence of genes producing biofilm (fnbB, clfaA, icaC, icaB) in S.aureus strain isolated from raw milk in sanandaj province

Mahsa Shojaei, H KarimiDarehabi and A Javadi
Islamic Azad University, Iran

One of the important virulence factors of *Staphylococcus aureus* is the ability to form biofilms. Biofilm is a functional consortium of microorganisms attached to the surface and is embedded in the extracellular polymeric substances (EPS) produced by the microorganisms. The biofilm formation by *S. aureus* involves complex processes. The biofilm cells are held together and exhibit an altered phenotype with respect to bacterial physiology, metabolism and gene transcription Various proteins are involved in mechanism of producing biofilm by staphylococci. In this study, to investigate the contamination of *Staphylococcus aureus,* 120 samples of raw milk was collected from all over the Sanandaj province. These sampling was taken aseptically and there were cultured due to conventional microbiological methods. PCR method was used for diagnosis confirmatory of Isolates, containing specific gene of the strain (nuc). Overall,the results of culture; And confirmed by molecular methods ; 49 samples (40.83%) were diagnosed as infected with *S.aureus.* Multiplex PCR and gene specific primers were used for analyzing the isolates to identify the presence of biofilm producing genes that includes clfaA, fnbB, icaC and icaB. The frequency of each of the genes is 71%, 71%, 65.3%, and 55.1% accordingly. Results show high contamination of raw milk in the province, and the high ability of these genes to producing biofilms.-

Biography

Mahsa Shojaei got his Master degree in Food Science & Technology from science & research branch University Of Kurdistan and also his Bachelor degree in above mentioned field from the University in Tehran.