The Detection of Fimbrial encoding Genes in *E. coli* Strains Isolated from Patients with Urinary Tract Infection

Nazemi A (PhD)
Assistant professor, Department of Biology, Islamic Azad University, Tonekabon Branch

Naderi M (BSc)
student of Microbiology, Department of Biology, Islamic Azad University, Tonekabon Branch,

Jafarpour M (PhD)
Assistant professor, Department of Biology, Islamic Azad University, Tonekabon Branch

Mirinargesi M (PhD)
Assistant professor, Department of Biology, Islamic Azad University-Tonekabon Branch

Sharifi Sh (BSc)
student of Medical Biology, Faculty of Medicine, University of Ankara, Turkey

Corresponding Author: Nazemi, A

E-mail: alinazemy@yahoo.com

Abstract

Bachground and objectives: The ability of adherence to the surface of host cell is very critical in the colonization of microbial pathogens. It has been revealed that *E.coli* strains that infect urinary tracts have different Fimbria such as I, S, P, FIC, Dr, and fimbrial adhesions**.**

Material and Methods: In this study, 363 urine samples were obtained from patients with Urinary Tract Infections referred to clinical laboratories in Western areas of Tehran, 2008-2010. By using biochemical tests, 200 samples were confirmed to be *E.coli*. First, DNA was extracted by boiling method and then the presence of fimbria fim, sfa, pap, foc, and afa genes tested by PCR.

Results: of 200 samples, the frequency of fimbria fim, sfa, pap, foc, and afa genes are 188 (%94), 34 (%17), 20 (%10), 61 (%31) and 71 (%35.5), respectively.

Conclusion: The results show that *fim* and *sfa* are the most fimbrial genes of *E.coli* isolated from urine samples .This information can be valuable in etiology of urinary tract infection (UTI), UTI administration, and vaccine production.

Key words: Urinary tract infection, fimbria, Bacterial, Escherichia *coli* (UPEC)