

**ChemTech****International Journal of ChemTech Research**CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555  
Vol.10 No.4, pp 627-631, 2017**Thymus vulgaris Extract Effect on Blood TNF- $\alpha$  and IL-10 Level and Bacterial Colonies in Escherichia coli Infected Mice Urinary Bladder****Abduraof Omar R Saadawi**<sup>1</sup>Master program in Biomedical Sciences, Faculty of Medicine, Brawijaya University, Malang, Indonesia

**Abstract** : The *Thymus vulgaris* extracts are effective as anti-inflammatory, immunomodulatory, antioxidant, antibacterial and antifungal. *E. coli* is a major pathogen involved in nosocomial infections and one of multi-drug resistance organisms. UTI is the most common extraintestinal *E. coli* infections and is caused by uropathogenic *E. coli* (UPEC). This study aimed to prove the *Thymus vulgaris* ethanol extract effect in increasing IL-10 and decreasing TNF- $\alpha$  and bacterial colonies in the urinary bladder. All *Thymus vulgaris* parts, which bought from Gharian-Libya, were dried, then macerated 3 times, and its ethanol was evaporated. Final extraction results were stored in the freezer. This study use 20 female mice divided into 5 groups; (1) positive control (infected with *E. coli*); (2) negative control (without infection); and treatment groups T1, T2, T3 (infected mice administrated with ethanol extract of *Thymus vulgaris* (ETV) 250, 500, 750 mg/kg B.wt). The bacterial colonies in urinary bladder were analyzed; the blood levels of TNF- $\alpha$ , IL-10 were analyzed by ELISA method. There was no visible *E. coli* colonies infection in urinary bladder in all treated groups. ETV increased the IL-10 and decrease TNF- $\alpha$  level in blood.

**Keywords:** Thymus vulgaris, TNF- $\alpha$ , IL-10, Escherichia coli, in vivo..

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