



Effect of *Thymus vulgaris* Extract on Level of Serum,IL12 and Bacterial Colonies in Liver in Mice Infected by *Salmonella Typhimurium*

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Abstract:The *Thymus vulgaris* extracts are effective as antibacterial and immunomodulating agents. Thymol is the main monoterpene phenol, isomeric with carvacrol, found in the thyme extract. On the other hand, the intracellular infection of salmonella stimulates macrophage to produce interleukin IL12 which plays an essential role to stimulate naïve CD4 T cells to differentiate Th1 cells for the enhancement of IFN- γ secretion. IFN- γ plays an important role in the activation of macrophage, as it destroys the phagocytized bacteria. The aim of this study is to determine the effect of *Thymus vulgaris* extracts on serum IL-12 level and to analyze the ability of *Thymus vulgaris* extracts to decrease bacterial colonies in the liver of mice infected with *S. typhimurium*. This study used 20 male mice strain Balb/c. The mice were randomly divided into 5 groups which consisted of 4 mice each; the positive control (mice infected with *S. Typhimurium*), negative control (mice without infection), and treatment groups of D1, D2, D3 (mice administrated with extract of *Thymus vulgaris* 250, 500, 750 mg/kg BW and infected with *S. typhimurium*). *Thymus vulgaris* extract causes the increase of serum IL12 and decreases *S. typhimurium* colonies in the liver of mouse samples infected by *S. typhimurium* bacteria.

Keywords:*Thymus vulgaris*, IL-12,*S. Typhimurium*.