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Antibacterial activity of *Ocimum sanctum* (tulsi) against enteropathogenic bacteria

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ABSTRACT: Hexane, petroleum ether, chloroform, ethyl acetate, acetone and methanol extracts of Tulsi (*Ocimum sanctum*) were analyzed for determination of antibacterial activity against enteric pathogenic bacteria: *E. coli*, *S. dysenteriae*, *S. typhi*, *P. aeruginosa* and *V. cholerae* using agar well diffusion method. Among all, only acetone extract had the most inhibitory effect on the growth of tested strains. The selected pathogenic bacteria were tested for antibiotic susceptibility pattern by disc diffusion method. A comparative study was done between the antibiotics and acetone extract and it was observed that acetone extract found to be remarkable sensitivity against the test pathogens. From the acetone extract 4 major and 13 minor compounds were obtained through TLC method and 37 fractions were obtained from the fractionization of acetone extract through column chromatography. Antibacterial activity of different fractions was determined by spot assay technique. From all the fractions obtained, fraction number 1,7,13,21 showed maximum antibacterial activities against the test pathogens. The Gas Chromatography Mass Spectrometry (GC-MS) of the fraction number 13 of the acetone extract revealed that it contained Octadecanoic acid, Methyl ester. It is suggested that stearic acid, methyl ester (octadecanoic acid, methyl ester) isolated from the acetone extract of *Ocimum sanctum* can be recommended for human trials against different bacterial pathogens.

Key Words: Antibiotic susceptibility test, efficacy, *Ocimum sanctum, E. coli*, *S. dysenteriae*, *S. typhi*, *P. aeruginosa* and *V. cholera*.