

Antibacterial Activity of Ethanolic and Methanolic Extract of *Zizyphus Jujuba* Against Some Pathogenic Bacteria

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Background & Objectives: *Zizyphus jujuba* commonly called, Red date, belongs to family Rhamnaceae. This family consists of 50 genera and more than 900 species; it is almost cosmopolitan and found mainly in subtropical to tropical areas. Many *Zizyphus* species yield edible fruit. This study was designed to examine in vitro antibacterial potential of methanolic and ethanolic extract of *Zizyphus jujube* mill.

Methods: The inhibitory effect of methanolic and ethanolic extract of *Zizyphus jujuba* was tested against 3 gram positive (*Bacillus cereus*, *Staphylococcus aureus*, *Staphylococcus epidermidis*) and 4 gram negative (*Salmonella thiphymorium*, *Escherichia coli*, *Proteus mirabilis*, *Pseudomonas aeruginosa*) ATCC bacterial species by disc diffusion methods at various concentration from 50, 100, 200, 400, 600 mg/ml. The viability of bacterial species was analysed by susceptibility tests [minimum inhibitory concentration (MIC) and minimum bacteriocidal concentration (MBC)].

Results: The extract of *Zizyphus jujube* mill was active against *S.aureus*, *S.epidermidis*. The zone of inhibition for this bacterial species was 10, 10 mm respectively, but showing no activity against *B.cereus*, *S.thyphi morium*, *E.coli*, *P.mirabilis*. MIC for *S.aureus*, *S.epidermidis* was 160, 200 respectively. Activity of MBC for them were bacteriostatic.

Conclusion: This extract can be used as antibacterial substance against some bacterial species such as *S.aureus*, *S.epidermidis*.

Keywords: *Zizyphus jujube*; Antibacterial Activity; MIC; MBC

