



Antioxidants, Total Phenolic Content and Antimicrobial Evaluation of *Myrtuscommunis* Leaf and Stem Extract

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Abstract: Medicinal plants are a source for a wide variety of natural antibacterial and antioxidants. The aim of this study was to investigate the antioxidant and antibacterial capacities of *Myrtuscommunis* leaf and stem. Methanol extracts of *Myrtuscommunis* leaf and stem were assessed for its antimicrobial activity. The antibacterial activity was determined using paper disc method against two bacteria namely *Staphylococcus aureus* and *Bacillus cereus*. The sensitivity in terms of zones of inhibition of both extract was determined. Gentamicin was used as a standard drug for the study of antibacterial activity. The antioxidant activity was determined by measuring total phenolic content (TPC), ferric reducing antioxidant power (FRAP), 2,2-diphenyl-1-picrylhydrazyl (DPPH). The result showed that the methanol extracts of *Myrtus* leaf and stem were effective against both the bacteria tested. The leaf extract of *Myrtus* exhibited a higher antibacterial activity than the stem extract of *Myrtus*. The acetone extract of *Myrtus* leaf showed the largest antioxidant TPC, FRAP and DPPH compared with stem extract. A marked antimicrobial and antioxidant activity of *Myrtuscommunis* leaf and stem extracts was observed which may be attributed to the presence of phenolic compounds and other phytochemicals. The plants can be used to control infectious diseases and prevent oxidative damage.

KeyWords: *Myrtuscommunis*, Antioxidants, Phenolics, Antibacterial activity.

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