

Antimicrobial and Antioxidants Efficacy of *Myrtus communis* Leaves

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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 the phenolic extract of *Myrtus communis* leaves. Methanol extracts of *Myrtus communis* leaves were assessed for its antimicrobial and antioxidant activity. The antibacterial activity was determined using paper disc method against five bacteria namely *Staphylococcus aureus*, *Bacillus cereus* and *Escherichia coli*, *Salmonella enteritidis* and *Vibrio parahaemolyticus*. The sensitivity in terms of zones of inhibition of all extract were determined. Ampicillin 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 communis* leaves were effective against all the bacteria tested. The methanol extract of *Myrtus communis* leaves show the largest antioxidant TPC, FRAP and DPPH. A marked antimicrobial and antioxidant activity of *Myrtus communis* leaves 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