Evaluation of antioxidant and antibacterial activities of leaf extracts of *Jasminum officinale* L. f. var. *grandiflorum* (L.) Kob.

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**Abstract:** Plants are a valuable source of secondary metabolites, which are used as pharmaceuticals, food additives, flavours and biopesticides. Phytochemicals and biological activities of plants are raising interest. The aim of this study was to evaluate the total phenolic content (TPC), antioxidant and antibacterial activities from *Jasminum officinale* L. f. var. *grandiflorum* (L.) Kob. (Spanish jasmine) leaf extracts. Crude methanol (ME) extract of Spanish jasmine leaves was separated by acid-base solvent partitioning into acidic (AE), neutral (NE) and aqueous (AQ) fractions. The TPC of the extracts were determined by Folin-Ciocalteu method. The highest TPC was found in AE extract (79.42 mgGAE/g dry weight) followed by the NE, ME, and AQ extracts. Antioxidant activity of the extracts was evaluated by DPPH assay. The AE extract exhibited the highest antioxidant activity with an EC₅₀ value of 4.2 µg/mL. The antibacterial activity was calculated based on the minimum inhibitory concentration using broth microdilution method. The results indicated that the AE extract showed the strongest activity against *Vibrio parahaemolyticus* and *Streptococcus sobrinus* with MIC values of 0.78 and 12.5 µg/mL, respectively. Interestingly, the AE extract exhibited the strongest activity against *Staphylococcus* strains, including drug-resistant strains (MRSA and VRSA) with an MIC range of 0.39-6.25 µg/mL. Our findings suggest that Spanish jasmine leaves should be considered as a possible new source of natural antioxidant and antibacterial agent.

**Keywords:** Spanish jasmine; Antioxidant activity; Antibacterial activity; Total phenolic content