

## Group 10, 11: Medicinal and Chemical Characters of *Stachys* Boiss.

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### **Abstract**

**Context:** *Stachys* species are used as integrative medicinal plants in various Mediterranean and Asian regions due to their curative properties.

**Aims:** The current investigation aimed to characterise the chemical constituents and antimicrobial properties of four solvent fractions and the volatile oil (VO) of *S. viticina*.

**Methods:** Qualitative and quantitative characteristics were assessed using standard phytochemical and analytical methods, while the VO was isolated and identified using microwave-ultrasonic and gas chromatography-mass spectrometry techniques, respectively. Moreover, the antimicrobial activity was evaluated against selected microbial strains from the American Type Culture Collection and clinical isolates such as *Shigella sonnei*, *Staphylococcus aureus*, *Enterococcus faecium*, *Escherichia coli*, *Pseudomonas aeruginosa*, *Candida albicans*, *Epidermophyton floccosum*, and methicillin resistant *Staphylococcus aureus* using a microdilution assay.

**Result:** Fifty-three molecules, which accounted for 100% of the total composition of the VO, were identified. Quantitative and qualitative examinations showed the presence of multiple constituents of biologically active compounds. Moreover, various antimicrobial activities were demonstrated.