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Chemical composition, moderate in vitro antibacterial and antifungal activity of the essential oil of pistacia vera L. and it's major constituents

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Abstract
The composition and antimicrobial activity of the essential oil of Pistacia vera L., grown in Iran, was studied. The oil was obtained from the resin and analyzed by GC-MS. Twenty compounds, accounting for ٩٩,٥ % of the total components, were identified. The main constituents were α-pinene, β-pinene, and α-thujene. The antimicrobial effects of the essential oil of Pistacia vera L. gum and its major constituents ((+)α-pinene, (-)α-pinene, (-)β-pinene, (-)α-thujene and α, β-thujene) were investigated. Antibacterial assays were performed using broth microdilution assays to determine the minimum inhibitory concentrations (MICs) against two Gram positive bacteria Staphylococcus aureus, Bacillus subtilis) and three Gram negative bacteria (Escherichia coli, Pseudomonas aeruginosa, Klebsiela pneumoniae). The antifungal activity against Candida albicans was determined by the agar dilution method. The essential oil of Pistacia vera L. gum exhibited strong inhibitory effects against Gram positive bacteria and C. albicans. Moreover, The results indicated that (-)β-pinene had the most inhibitory effects against Gram positive bacteria and C. albicans while α, β-thujene was more active against Gram negative bacteria.

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