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Chemical composition and antimicrobial study of *Salsola baryosma* (Amaranthaceae) from Cholistan Desert, Punjab, Pakistan

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The present study reveals the chemical composition and antimicrobial activity of extracts of *Salsola baryosma*. Phytochemical study was done by GC-MS and antibacterial and antifungal activity was subjected against four bacterial strains and two fungal strains using agar well diffusion method and test tube dilution method respectively. The GC-MS study revealed the presence of sixteen compounds in n-hexane extract namely; Nonadecane, 2-methyl-(1), Isolongifolene, 4,5,9,10-dehydro-(2), Hexadecane, 2,6,11,15-tetramethyl-(3), Nonadecane, 2-methyl(4), Nonadecane, 2-methyl(5), n- Hexadecanoic acid(6), Octacosane(7), Tetracosane(8), Pentacosane(9), 4,8,12,16-Tetramethylheptadecan-4-oide(10), 9-Hexadecanoic, 9-octadecenyl ester, [Z,Z]-(11), Hexacosane(12), Heptacosane(13), Tetratetracontane(14), Hexacosane, 9-octyl-(15), Heptacosane, 9-hexyl-(16). The ethanolic extract of the aerial parts showed the most promising activity among selected four solvents against clinically isolated pathogenic bacterial strains. The ethanol extract showed more antifungal activity against *Fusarium moniliforme* and *Helminthosporium sativum*. The plant contains useful bioactive compounds which have inhibitory potential against different strains of bacteria and fungi.

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