

# Integrative Biology

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## Synergistic antimicrobial effects and GC-MS analysis of phytocomponents of *Commiphora quadricincta*

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The *Commiphora quadricincta*, a small tree, belong to Burseraceae family is traditionally known for its medicinal properties. The present study was therefore carried out to investigate the synergistic antimicrobial activities and the phytochemicals of the bioactive components in the extract of this plant species. The antimicrobial activities of stem bark and leaves extract was investigated against 7 medically important bacterial strains, namely *Bacillus subtilis*, MRSA, *Micrococcus*, *Escherichia coli*, *Pseudomonas aeruginosa*, *Staphylococcus aureus* and *Klebsella pneumoniae* and five fungi (*Aspergillus niger*, *A. fumigatus*, *A. flavus*, *Candida albicans* and *Saccharomyces* spp.). The antibacterial activity was determined using agar well diffusion method. The most susceptible bacteria to this extract were *Escherichia coli*, while the most susceptible fungi were *A. flavus*. GC-MS analysis revealed that the ethanol extract of *Commiphora quadricincta* contained mainly; 2-Methyl-3-pentanol (2.84%); Butyl hydroxy toluene (22.32%); 9,12,15-Octadecatrienoic acid, 2-phenyl-1, 3-dioxan-5-yl ester (5.90); Ethyl isoallocholate (11.21%);  $\alpha$ -Amyrin (2.22%) and Flavone 4-OH,5-OH,7-dioglucoside (11.21%). Most identified compounds are known to have antimicrobial activity.

### Biography

Nehad Mahmoud Gumgumjee has completed her PhD and Postdoctoral studies from King Abdulaziz University, Saudi Arabia. She has published more than 10 papers in reputed journals and has been serving as an Editorial Board Member of repute.

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