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## ABSTRACT

The methanolic extracts of *Citrullus colocynthis*, *Rhazya stricta*, *Datura stramonium* and *Zygophyllum coccineum* were evaluated for the antimicrobial activity against *Pseudomonas aeruginosa* ATCC 27853, *Escherichia coli* ATCC 25922, *Staphylococcus aureus* ATCC 25928, *Streptococcus pyogenes* grp A (clinical isolate), *Bacillus subtilis* ATCC 6633 and *Candida albicans* ATCC 10231. The extract of different plants tested showed varying degree of inhibitory activity against the tested pathogens. Extract of *C. colocynthis* showed the highest activity followed by *R. stricta*, while *Z. coccineum* exhibited least activity. The gram positive bacteria were observed to be more sensitive to plant extracts as compare to gram negative bacteria. Moreover, all extract were effective against *C. albicans*. While, only the extract of *C. colocynthis* was able to inhibit the growth of *P. aeruginosa* (18.3 mm). The maximum zone of inhibition was observed against *S. aureus* (31.3mm) by the extract of *C. colocynthis* and the MIC against the same bacteria was 0.2 mg/ml. The GCMS analysis of *C. colocynthis* extract showed the presence of several esters, glycosides, alkaloids and flavonoids. However, the main component detected in the extract was l-(+)-Ascorbic acid 2,6-dihexadecanoate; a known hyaluronidase inhibitor. Therefore, the results showed that *C. colocynthis* possesses a broad spectrum of activity against pathogenic bacteria responsible for the most common microbial diseases.

**Keywords :** Antimicrobial activity, medicinal plants, *Citrullus colocynthis*, GC-MS.