

Phytochemical Screening and Antimicrobial Activity of *Limium indicum* and *Euphorbia granulata*

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Abstract : Medicinal plants are considered as rich source of ingredients which can be used in drug development and synthesis. Moreover, these plants play a vital role in the development of human culture of using ayurvedic medicines around the whole world. Among all plants, dessert plants are being proved as effective source of ayurvedic medicines and remedy against many diseases. Considering the fact, two plant species *Limium indicum* and *Euphorbia granulata* were taken from Cholistan dessert of Bahawalpur, Pakistan. Firstly, phytochemical screening was done by making dry and fresh plant extracts in five different solvents i.e Petroleum ether, benzene, chloroform, ethanol and methanol. Standard confirmation tests for all compounds were applied for analysis. Results revealed the presence of high range of bioactive compounds such as alkaloids, terpenoids, glycosides, steroids, flavonoids, saponins, phytosterols, oxalic acid, anthocyanin and quinone in both plants. Best results were obtained by methanolic, chloroform and petroleum ether extracts and methanolic, ethanolic and benzene extracts of *Limium indicum* and *Euphorbia granulata* respectively. Considering the results, methanolic extracts of both plants were further analysed for antibacterial activity. Plants were analysed against four pathogens including *Escherchia coli*, *Proteus vulgaris*, *Klebsiella pneumonia* and *Pseudomonas aruginosa* using disc diffusion method. *Limium indicum* showed highly significant activity against all pathogens while *Euphorbia granulata* showed significant activity against *Klebsiella pneumonia* and *Proteus vulgaris* but lesser against *Escherchia coli* and *Pseudomonas aruginosa*. MIC of extracts against each positive bacterium was calculated and recorded. Present plants can be considered for making useful drugs but further studies are needed to isolate active agents from plant extracts for drug development.

Keywords : antibacterial activity, *Euphorbia granulata*, *Limium indicum*, medicinal plants, phytochemical screening

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