

Phytochemical analysis and antimicrobial activity of different solvent extracts of stem of *Cynanchum viminale* (L.) L. (Muwakeeriya)

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In Sri Lanka, traditional healers use the *Cynanchum viminale* for treatment of various diseases associated with microbial infections. Although medicinal activities of many plants have been well documented in Sri Lanka, there is very less information about *C. viminale*. With this background, the present study aimed to elucidate antimicrobial activity and to analyse phytochemicals of ethyl acetate and water extracts of stem of *C. viminale*. The antimicrobial assays were carried out by agar well diffusion method using crude extracts (100 mg/ 100 μ L). Five different bacterial species and three different *Candida* species were screened. Streptomycin sulphate (50 ng/100 μ L) and Fungicon (100 ng/100 μ L) were used as positive control for bacteria and *Candida* species, respectively. The phytochemical analysis showed positive to tannins, saponins, phlobatannins, flavonoids, cardiac glycosides, alkaloids, terpenoids and steroids. Ethyl acetate extract showed highest activity against the bacteria *Escherichia coli* (ATCC 25922) with diameter of inhibition zones 26.9 ± 1.4 mm and it also showed anti-candida activity against all tested *Candida* species and the highest activity (19.03 ± 0.34) was against *C. krusei*. The present study confirmed the antimicrobial activity of *C. viminale* and revealed the major groups of phytochemicals in the extracts. Further studies are needed to find out the active compounds in these extracts.

Keywords: *Cynanchum viminale*, antibacterial activity, anti-candida activity and phytochemical analysis

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