

Phytochemical Screening and Antibacterial Activity of *Eclipta prostata* and *Wedelia chinensis*

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Morphological characters of *Eclipta prostata* and *Wedelia chinensis* (Compositae) are similar except flowers. *E.prostata* (*Venkarisalai*) used in the preparation of *Anjanam* (Eye ointment) for eye diseases and hair oils while *W.chinensis* (*Manjatkarisalai*) used in liver diseases. Leaves of both plants are used in skin diseases. The aim of the study was to evaluate the antibacterial activity of decoction and ethanolic extract of whole plants of *E.prostata* and *W.chinensis* against *Staphylococcus aureus* (ATCC 25923), *Pseudomonas aeruginosa* (ATCC 27853), *Escherichia coli* (ATCC 25922) and *Enterococcus faecalis* (ATCC 29212) and to screen the phytochemicals. The antibacterial activity was evaluated by using the standard cut-well diffusion method with Nutrient Agar, while a control was maintained. The diameter of the zone of inhibition (ZOI) was measured after incubation. Qualitative phytochemical analysis was done to test for the presence of phytochemicals. The ethanolic extract of plants possesses tannins, flavanoids, steroids, cardiac glycoside, alkaloids and terpenoids. Decoctions of both plants contain cardiac glycoside, alkaloids and terpenoids, additionally Phlobatannins found in *E.prostata*. Decoction of both plants showed antibacterial activity against *S.aureus* and *P.aeruginos*. The ZOI was ranging from 14±0.23 to 24±0.8mm. Ethanolic extract of both plants showed inhibitory activity against all tested organisms. The diameter of ZOI is ranging from 10± 0.33mm to 36± 0.66mm. The decoction of both didn't show inhibitory activity but the ethanolic extract showed the inhibitory activity against *E.faecalis*. The decoction of *W.chinensis* didn't show inhibitory activity against *E. coli*. More phytochemicals are in the ethanolic extract. The ethanolic extract of both plants have potential anti-microbial compounds and that can be used in treatment of infectious diseases caused by

these organisms. Further study should be carried out against a wider spectrum of organisms.

Key Words: Antibacterial activity, phytochemical screening, *Eclipta prostate*, *Wedelia chinensis*