

Antibacterial Activity and Preliminary Screening of Phytochemicals from Whole Plant of *Enicostemma littorale* (Blume)

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ABSTRACT. *Enicostemma littorale* Blume is a glabrous perennial herb belonging to the family Gentianaceae. The whole plant is used in traditional medicine for the treatment of various diseases. The decoction is used to treat skin diseases such as kiranthi, itching and scabies. Antibacterial activity of the aqueous extract of the whole plant of *E. littorale* on eight bacterial isolates was investigated. They are *Staphylococcus aureus* – NCTC 6571, *Escherichia coli* – NCTC -10418, *Pseudomonas aeruginosa* – NCTC – 10662 and five wild strains of Methicillin resistant *S. aureus* (MRSA). This was performed by the cut well diffusion and agar dilution methods. The aqueous extract of *E. littorale* showed growth inhibitory action against *S. aureus* (NCTC 6571 and 5 MRSA strains). The growth inhibitory action against *E. coli* and *P. aeruginosa* could not be demonstrated using the agar dilution method, although inhibition of *E. coli* was shown using the cut well method. Further exploration of activity of the aqueous extract against a wider range of skin pathogens would be helpful. Phytochemical screening was carried out to identify the active functional groups of this plant, which revealed the presence of alkaloids, saponins, steroids, flavonoids, glycosides and triterpenoids. The ability of the aqueous extract of *E. littorale* to inhibit the growth of bacteria is an indication of its antibacterial potential, which may be employed in the management of bacterial infections.

Keywords: Antibacterial activity, *enicostemma littorale*, phytochemical screening

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