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Research article

INFLUENCE OF EXTRACTION SOLVENTS ON THE ANTIBACTERIAL PROPERTIES OF *PAEDERIA FOETIDA* LEAF EXTRACTS AGAINST *E. COLI*

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Abstract

This study aimed to solvent selection for testing the medicinal plant Paederia foetida leaf extracts for combating bacterial infection. UV–VIS spectroscopy, therefore the extraction factor (EF) analysis and FTIR spectra indicate that ethanol is more efficient solvent over the acetone. Antibacterial activity against Escherichia coli was evaluated, and a concentration-dependent inhibition was observed. The antibacterial activity of the Paederia foetida leaf extracts consist of specific phytochemicals that may disrupt bacterial membrane integrity and inhibit metabolic pathways. Therefore, our findings illustrate Paederia foetida has the potential to be a promising resource for natural antibacterial agents, where ethanol is the preferred extraction solvent.