

ANTIMICROBIAL SCREENING OF CALLUS EXTRACTS OF

CANTHIUM PARVIFLORUM LAM

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ABSTRACT

A large number of medicinal plants have been extensively screened for biologically active molecules with the intension of finding new drugs for treating different diseases. To determine the antimicrobial activity potential of leaf callus cultures of *Canthium parviflorum*, the present study is designed to screen and identify the therapeutic suitability of this plant extract for the treatment of a particular disease. The callus from the leaf explants of the species were induced on Murashige and Skoog basal medium supplemented with various concentrations of 2, 4-D. The callus was extracted sequentially with hexane, chloroform, ethyl acetate and methanol for 24 h by using Soxhlet apparatus. The inhibition of zone mean values were statistically analyzed with the MINITAB 14 by the general one way (un stacked) analysis of variance (ANOVA) to find out the most effective extracts. The extracts were exposed against Gram positive and Gram negative bacteria as well as fungi by agar well diffusion method at 100 ppm concentrations. Among four extracts, chloroform and methanol extracts showed high zone of inhibition in all tested bacteria. Methanol extract generated high zone of inhibition in all tested fungi. The present study indicated that the callus extracts of *Canthium parviflorum* has potent antimicrobial compounds, which of these extracts need to be isolated and characterized. The plant leaf callus can be further subjected to enhancement and isolation of the therapeutic antimicrobials and carry out further pharmacological evaluation.

KEYWORDS: *Canthium parviflorum*, Callus Extracts, *In vitro* Culture, Antimicrobial Activity