

## Antimicrobial activity of *Baliospermum montanum* (Wild.) Muell.Arg.

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The present study was aimed to develop an efficient protocol for callus induction and to investigate the antimicrobial activity of *Baliospermum montanum*. Callus induction was induced from leaf explants on Murashige & Skoog (MS) medium supplemented with 2, 4-dichlorophenoxyacetic acid (2, 4-D) and 6-furfuryl amino purine (KIN). Aqueous, methanol and chloroform extracts of root, stem, leaf and callus were screened for potential antibacterial activity against selected bacterial strains (*Bacillus subtilis*, *Escherichia coli*, *Klebsiella pneumoniae*, *Pseudomonas fluorescens* and *Staphylococcus aureus*) by agar well diffusion method. Antifungal activity was carried out by food poison technique against *Fusarium oxysporum*. Maximum callus induction was observed in 2,4-D (9.05 µM/l) and KIN(23.24 µM/l). Methanolic extract of leaf and callus showed maximum zone of inhibition against *Staphylococcus aureus*. Whereas, aqueous extract of the stem and root exhibited maximum zone of inhibition against *Bacillus subtilis*. Methanolic extracts showed higher antifungal activity compared to other extracts. In conclusion methanolic extract was proved to be a better solvent for extraction of antimicrobial metabolites from *in vivo* and *in vitro* leaf derived callus.

**Key words:** Alkaloids, *Baliospermum montanum*, , growth regulators, pathogens, secondary metabolites, sterilants

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