

Secondary Metabolite Profiling and Antimicrobial Activity of Leaf Extract of *Tecomella undulata* (Sm.) Seem

Authors : Richa Bhardwaj

Abstract : *Tecomella undulata* (Sm.) Seem is a monotypic genus belonging to family Bignoniaceae. The plant holds tremendous potential of medicinal value and has been traditionally used in various ailments like syphilis, leukoderma, blood disorders to name a few. The plant has gained prominence due to the presence of some prominent secondary metabolites. The present study focuses on the GC-MS analysis of leaf extracts of *T. undulata* which revealed the presence of certain bioactive compounds like stigmasterol, sitosterol, thiazoline, phytol, phthalic acid, methyl alpha ketopalmitate and so forth. A total of about 20 bioactive compounds were identified from the leaf extract spectra. Antimicrobial activity of the leaf extract was assayed against pathogenic bacteria and fungi. The alkaloids from leaf extracts showed antimicrobial activity against *E.coli* and *B.subtilis*. The flavonoids from leaves showed positive activity against *Penicillium* species and *Candida albicans*. The study thus infers that the presence of bioactive components may be the principle behind the antimicrobial property of different plant parts and therefore *Tecomella* forms a potential plant for herbal drug formulation.

Keywords : *Tecomella undulata*, bioactive compounds, GC-MS, antimicrobial activity

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