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Antimicrobial and Free Radical Scavenging Activities of the Dichloromethane Extract of *Goniothalamus umbrosus*

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Abstract: The aim of the present study, is to evaluate the antimicrobial, phenolic content and free radical scavenging properties of the dichloromethane extract of *Goniothalamus umbrosus* leaves. The antimicrobial activities were evaluated using 2 Gram-positive bacteria, Methicillin Resistant *Staphylococcus aureus* (MRSA) and *Bacillus subtilis* B 29 and 2 Gram-negative bacteria, *Pseudomonas aeruginosa* 60690 and *Salmonella choleraesuis* using disc diffusion method and compared alongside to streptomycin. Antioxidant effect and total phenolic content of the extract were also measured by DPPH assay and Folin-Ciocalteu reagent, respectively. The results have concluded that the extract explicit a broad spectrum antimicrobial activities against all tested bacteria. However, antioxidant activity is significantly different from the activity of the positive control, BHT. Accordingly, the total phenolic compounds were also, observed to be correlated positively with the low antioxidant activity revealed by the extract. As a conclusion, the promising broad spectrum antimicrobial activities of the dichloromethane extract of the leaves of *G. umbrosus* might be due a different chemical constituent (s) since, the phenolic compounds were not found richly in the extract. Further, phytochemical investigations are currently conducted to explore the active ingredients as new substance (s) in the pharmaceutical industry.

Key words: *Goniothalamus umbrosus*, antimicrobial, free radical scavenging, total phenolic contents, pharmaceutical industry