

**ANTIMICROBIAL ACTIVITY OF *SCHUMACHERIA ANGUSTIFOLIA*
AND *SCHUMACHERIA CASTANEIFOLIA***

**S. Jabar¹, C.J. Bandara¹, B.M.R. Bandara¹, A. Wickramasinghe^{1*},
V. Karunaratne¹, S. Rajapakse² and D.S.A. Wijesundara³**

¹*Department of Chemistry, Faculty of Science, University of Peradeniya, Sri Lanka*

²*Department of Molecular Biology and Biotechnology, Faculty of Science, University of Peradeniya, Sri Lanka*

³*Royal Botanic Gardens, Peradeniya, Sri Lanka*

*awick@pdn.ac.lk

Plants have long been used for medicinal purposes. Today, antimicrobial resistance has become a major problem globally. Hence, there is a continuous search of new antimicrobial drugs for treatment of infectious diseases which has renewed the interest in natural product research. The genus *Schumacheria* belonging to the family Dilleniaceae, which is endemic to Sri Lanka, contains three species namely *S. castaneifolia*, *S. alnifolia* and *S. angustifolia*. These species are commonly found in the wet zone of the country and the present study is an attempt to assess the antibacterial and antifungal activities of the species *S. castaneifolia* and *S. angustifolia*. The plant *S. angustifolia* was collected from mountain Haycocok in Hiniduma region and the plant *S. castaneifolia* was collected from Ilukkovita in Thummodara area. Air dried leaves, stem bark and root bark of *S. angustifolia* and flowers of *S. angustifolia* and *S. castaneifolia* were separately and sequentially extracted into hexane, dichloromethane and methanol and the extracts were concentrated. The antimicrobial activity was studied for twelve *Schumacheria* plant extracts against gram-positive bacteria *Staphylococcus aureus*, gram-negative bacteria *Escherichia coli* and fungi *Aspergillus niger* by using agar well diffusion method (well diameter 6 mm) as a pre-screening assay. The study was also focussed on determining the Minimum Inhibition concentration (MIC) for quantification by using agar plate dilution method. Methanolic extracts of *S. angustifolia* leaf, stem bark and flower showed antibacterial activities with the MIC value of 550 ppm whereas the root bark showed the MIC value of 512 ppm against both bacteria *S. aureus* and *E. coli*. Further, dichloromethane extract of *S. angustifolia* stem bark displayed moderate antibacterial activity with the MIC value of 750 ppm against both bacterial strains. In addition, methanol and dichloromethane extracts of *S. castaneifolia* flower exhibited comparably higher activities with MIC values of 300-350 ppm and 300 ppm against both strains respectively. All the other extracts studied showed higher MIC values (>1024 ppm). Moreover, no antifungal activities were observed in any of the extracts studied.

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