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Chemistry and Bioactivity of *Schumacheria castaneifolia*, A Plant Endemic to Sri Lanka

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Compounds isolated from tropical plants have provided useful chemotherapeutic agents for treatment of many diseases. Most of these compounds have complex structures, and thus they would not have been developed from a synthetic procedure or a combinational approach. Hence there is a considerable demand for the development of new drugs from compounds isolated from tropical plants. The genus *Schumacheria* belonging to the family Dilleniaceae is endemic to Sri Lanka and contains three species, *S. castaneifolia*, *S. alnifolia* and *S. angustifolia*. There has been no systematic search for bioactive agents from this genus.

In this study, we investigated the chemistry and bioactivity of *S. castaneifolia*, collected from Thummodara in the Sabaragamuwa Province. Leaves, root-bark and stem-bark were separately extracted into methanol, and the extracts were subjected to conventional and bioassay-guided fractionation using medium pressure liquid chromatography, flash chromatography and thin layer chromatography. Extracts, fractions and pure compounds were tested for the following activities: antioxidant activity using the 2,2-diphenyl-1-picrylhydrazyl assay, and cytotoxicity using the brine shrimp (*Artemia salina*) assay.

Eleven compounds were isolated from the methanolic extract of the stem-bark. Preliminary spectroscopic analysis revealed that six of these compounds have terpenoid-like structures. The bioassay guided fractionation of the same extract afforded an antioxidant compound with IC_{50} = 9.5 ppm and a cytotoxic compound with LC_{50} = 7.6 ppm.

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