





## XANTHONES FROM CALOPHYLLUM BUXIFOLIUM & CALOPHYLLUM HOSEI

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Calophyllum which is also known as 'bintagor' belongs to the Clusiaceae family. Previous work on this genus has shown it to be rich in secondary metabolites such as coumarins, xanthones, and terpenoids. Our recent work on the extract of the stem bark of Calophyllum buxifolium and Calophyllum hosei has led to the isolation of ten xanthones, ananixanthone, twaithesixanthone, mangostingone, buxixanthone, caloxanthone B, caloxanthone A, 1,3,7tryhydroxy-2-(3-methylbut-2-enyl)-xanthone, calozeyloxanthone, tovopyrifolin C rubraxanthone. These compounds were isolated through a series of column chromatographic methods such as flash column chromatography, gravity column chromatography and LH-20 sephadex. Their structures were confirmed by gas chromatography-mass spectrometry (GCMS), infrared (IR), and 1D and 2D NMR spectroscopy.

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## ANTIOXIDANT, CHOLINESTERASE AND TYROSINASE INHIBITORY ACTIVITIES OF CALOPHYLLUM SYMINGTONIANUM AND CALOPHYLLUM **DEPRESSINERVOSUM**

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Calophyllum is a pan-tropical genus belongs to the Guttiferae family and locally known in Malaysia as "bintangor". There has been a continual interest to further investigate the phytochemistry of Calophyllum spp since this genus is a rich source of active secondary metabolites. In this study, antioxidant, cholinesterase and tyrosinase enzymatic inhibition activities of leaves and heartwood of Calophyllum symingtonianum, and the bark of Calophyllum depressinervosum were conducted. All extracts were tested for their total phenolic content and antioxidant activities by DPPH radical scavenging and  $\beta$ -carotene bleaching. Cholinesterase inhibition by Ellman's method and tyrosinase inhibition using L-DOPA as a substrate were also tested. All methanol extracts were found to exhibit strong DPPH radical scavenging effects. The methanol extract of C. depressinervosum bark showed inhibition of  $\beta$ -carotene bleaching 78.46% and butyrylcholinesterase (BChE). All extracts showed moderate inhibition towards tyrosinase activity with an IC<sub>50</sub> of more than 100 µg/mL.

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