

Chemical Constituents of Indonesian *Micromelum minutum* Leaves and Their Cytotoxicity Against MCF-7 and 4T1 Breast Cancer Cells

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Abstract. *Micromelum minutum* is used widely in traditional folk medicine. Although this species has been investigated extensively and several bioactive compounds have been isolated, little work has been done on Indonesian *M. minutum*. This research aimed to study the chemical constituents and biological activities of *M. minutum* cultivated in Bantimurung Bulusaraung National Park, South Sulawesi, Indonesia. The isolated compounds were assessed for their cytotoxicity towards MCF-7 and 4T1 cell lines by MTT method. The dried ground leaves of *M. minutum* were sequentially macerated with n-hexane, ethyl acetate, and methanol. The n-hexane and ethyl acetate extracts contained a flavonoid 5,7-dihydroxy-3,4',8-trimethoxyflavone (**1**) which inhibited MCF-7 and 4T1 cell viability by 50% at concentrations of 369±8 and 227±5 µM, respectively. Further separation of the ethyl acetate extract by column chromatography yielded acetyldihydromicromelin A (**2**) and a mixture of dihydromicromelin A (**3**) and dihydromicromelin B (**4**), which were not active toward MCF-7 and 4T1 cells.

Keywords: 5,7-dihydroxy-3,4',8-trimethoxyflavone; breast cancer cell line; cytotoxic activity; dihydromicromelin derivatives; *Micromelum minutum*.