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AMMARARAT NARINTORN : PHYTOCHEMICAL STUDY OF
ANTICANCER COMPONENTS FROM *MURDANNIA LORIFORMIS* (HASSK.)
ROLLA RAO ET KAMMATHY. THESIS ADVISORS : WEENA
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Murdannia loriformis (Hassk.) Rolla Rao et Kammathy, a Chinese herb widely cultivated throughout Thailand, belongs to the family Commelinaceae. It has been used in Thailand as a remedy for cancer ailments. A previous investigation reported an active component exerting moderately cytotoxicity against breast ATCC HTB20 (BT474) and colon (SW620) cancer cell lines (ED_{50} of 16 $\mu\text{g/ml}$). The component was a glycosphingolipid (G1b), named 1- β -O-D-glucopyranosyl-2-(2'-hydroxy-6'-ene-cosamide)-sphingosine. The present study investigated the whole plant chemical composition of the ethanolic extract of *Murdannia loriformis*. The active glycosphingolipid (G1b) and phytosteryl glucoside (G1a) were isolated. The structures of G1a and G1b were earlier reported. The ceramide (MC1) has been isolated from the plant, and this study is the first time it is reported. The identification of the isolated compounds was accomplished using modern NMR spectroscopy. The structure of MC1($\text{C}_{43}\text{H}_{87}\text{NO}_5$) was identified as 3 β -hydroxy-3-(1'-hydroxy-hexadecane)-2-(2''-hydroxy-tetracosamide)-propane-1-ol. The quantitative analysis of the glycosphingolipid (G1b) using high-performance liquid chromatography (HPLC) was developed. An appropriate isocratic condition was established by using C_{18} -Hyperbond (10 μm , 300x3.9mm i.d.) column, the solvent system of methanol-water (10:0.2) and UV detector at 210 nm. The glycosphingolipid (G1b) peak appeared at the retention time of 20 minutes. The validation of the method is also described.