

Chemical constituents and new xanthone derivatives from *Mesua ferrea* and *Mesua congestiflora*

Abstract

The phytochemical study on the root bark of *Mesua ferrea* and the roots of *Mesua congestiflora* resulted in the isolation and identification of nine compounds. Seven xanthenes isolated from the root bark of *Mesua ferrea* were mesuaferrin A (1), mesuaferrin B (2), mesuaferrin C (3), caloxanthone C (4), macluraxanthone (5), 1,5-dihydroxyxanthone (6) and tocopyrifolin C (7). Meanwhile, *Mesua congestiflora* afforded one benzophenone, congestiflorone (8) together with a xanthone α -mangostin (9). The structural modification reactions were also carried out to obtain two new compounds which are caloxanthone C diacetate (10) and congestiflorone acetate (11). The characterizations of these compounds were achieved through a variety of spectroscopic techniques such as 1D and 2D NMR, UV, IR and GC-MS.

Keyword: Acetate; Benzophenone; *Mesua congestiflora*; *Mesua ferrea*; Xanthone.