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 xanthones 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 tovopyrifolin C (7). Meanwhile, Mesua congestiflora afforded one benzophenone, congestiflorone (8) together with a xanthone a-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.