A new anthraquinone from Morinda citrifolia roots

ABSTRACT

An investigation of Morinda citrifolia roots afforded a new anthraquinone, 2-ethoxy-1-hydroxyanthraquinone (1), along with five other known anthraquinones: 1-hydroxy-2-methylanthraquinone (2), damnacanthal (3), nordamnacanthal (4), 2-formyl-1-hydroxyanthraquinone (5) and morindone-6-methyl-ether (6). This is the first report on the isolation of morindone-6-methyl-ether (6) from this plant. The structures of these compounds were elucidated based on spectroscopic analyses such as NMR, MS and IR. Biological evaluation of five pure compounds and all the extracts against the larvae of Aedes aegypti indicated 1-hydroxy-2-methylanthraquinone (2) and damnacanthal (3) were the extracts to exhibit promising larvicidal activities.

Keyword: Morinda citrifolia; 2-ethoxy-1-hydroxyanthraquinone; Anthraquinones; Noni; Aedes aegypti