

Insecticidal rocaglamide derivatives from *Aglaia duppereana*

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Abstract



Twigs of *Aglaia duppereana* collected in Vietnam yielded the cyclopentatetrahydrobenzofuran, rocaglamide, and also six of its congeners. Whereas three of the isolated compounds were already known, four rocaglamide derivatives were new natural products. Elucidation of their structures and absolute configurations is described. All the rocaglamide derivatives isolated exhibited strong insecticidal activity towards neonate larvae of the polyphagous pest insect *Spodoptera littoralis* when incorporated into artificial diet. The LC_{50} for rocaglamide, which was one of the most active compounds encountered in this study, was 0.9 ppm, identical to that of azadirachtin used as a positive control in feeding experiments.

Subject-index terms: *Aglaia duppereana*; Meliaceae; twigs; rocaglamide derivatives; structural elucidation; natural insecticides; *Spodoptera littoralis*

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