Juvenile hormone III analogues from the stem of Cananga latifolia

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Abstract: The methanolic extract from the stems of Cananga latifolia yielded six juvenile hormone III (JH III) derivatives. They were identified as \((2E,6E,10R)\)-10,11-epoxy-3,7,11-trimethylododeca-2,6-dienoic acid methyl ester (1), \((2E,6E,10R)\)-10-hydroxy-3,7,11-trimethylododeca-2,6,11-trienoic acid methyl ester (2), \((2E,6E)\)-11-hydroxy-3,7,11-trimethylododeca-10-one-2,6-dienoic acid methyl ester (3), \((2E,6E,10R)\)-10-acetoxy-11-hydroxy-3,7,11-trimethyl dodeca-2,6-dienoic acid methyl ester (4) and \((2E,6E,10R)\)-10,11-dihydroxy-3,7,11-trimethylododeca-2,6-dienoic acid methyl ester (5) by spectroscopic methods as well as comparisons with the literature. In addition, compounds 1, 2 and 5 exhibited antifungal activity against Pythium insidiosum by showing inhibition zone with diameters of 16.0, 14.0 and 24.0 mm, respectively.

Keywords: Cananga latifolia; Juvenile hormone III; Sesquiterpenes; Annonaceae