Cytotoxic diterpenoids from Vietnamese medicinal plant Croton tonkinensis GAGNEP.

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Abstract: Six new ent-kaurane-type diterpenoids were isolated from the leaves of the endemic Vietnamese medicinal plant Croton tonkinensis GAGNEP. (Euphorbiaceae) together with three known ent-11?-acetoxy-7?,14?-dihydroxykaur- 16-en-15-one (1), ent-kaur-16-en-15-one 18-oic acid (5) and ent-18-hydroxykaur-16-ene (7). Their structures were determined by spectroscopic analyses to be ent-7?-acetoxy-11?-hydroxykaur-16-en-15-one (2), ent-18-acetoxy- 11?-hydroxykaur-16-en-15-one (3), ent-11?-acetoxykaur-16-en-18-oic acid (4), ent-15?,18-dihydroxykaur-16-ene (6), ent-11?,18-diacetoxy- 7?-hydroxykaur-16-en-15-one (8), and ent-(16S)-1?,14?- diacetoxy-7?-hydroxy-17-methoxykauran-15-one (14). ent-Kaurane-type diterpenoids from Croton tonkinensis 2-4, 6, and 9-13, were tested for toxicity in the brine shrimp lethality assay. Compounds 9, 10, and 12 demonstrated significant activity, compounds 2, 3, 6, and 11 showed weak activity, and compounds 4 and 13 were inactive. ?? 2005 Pharmaceutical Society of Japan.

Author Keywords: Brine shrimp lethality test; Croton tonkinensis; Cytotoxicity; ent-kaurane-type diterpenoid; Euphorbiaceae

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