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Isolation and anti-HSV2 studies of compounds from *Euphorbia deightonii*

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Background: Euphorbiaceae family has 275 genera and 7,500 species, found in tropical and temperate regions [1,2]. *Euphorbia deightonii* Croizat, native to West Africa is a cactus-like shrub which grows to 6 m tall. Historically, it served ornamental, medical, and military purposes [3].
Aims: To isolate compounds from *E. deightonii* and evaluation of anti-HSV activities of selected compounds.
Methods: Dried plant material (1.2 kg) was extracted with methanol via percolation. Solvent-solvent fractionation with chloroform yielded chloroform portion which then undergo open column chromatography on polyamide using a step gradient of methanol-water to yield four fractions; 20%, 60%, 80% and 100% methanol, respectively. Compounds of the 60% fraction was purified using NP and RP-VLC, NP and RP HPLC, PLC. Structures were established using NMR and HRMS data.
Results: 38 compounds (**1–38**) were isolated which are 30 diterpenes (i.e. 27 ingol, 2 *ent*-atisane and 1 stachane types), 3 tritepenes, 2 lignans, 1 phenyl propanoid, 1 coumarin and 1 ellagic acid derivative. The research also yielded 11 new compounds: 9 ingol diterpenes, 1 tritepene and 1 lignan. All 8 non-diterpenoids were evaluated for anti-HSV2 activity with acyclovir as positive control. Two new compounds (**33** and **34**) and two known compounds (**32** and **37**) showed activity with IC_{50} of 7.05, 11.73, 2.42, μM, and 32.09 nM, respectively. Interestingly, coumarin **37** has comparable activity to acyclovir.

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