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Two lignans derivatives and two fusicoccane diterpenoids from the whole plant of *Hypoestes verticillaris* (L.F.) Sol. Ex roem. & schul

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Abstract

Bioassay-guided screening of *Hypoestes verticillaris* whole plant CH₂Cl₂:MeOH (1:1) extract for anti-plasmodial activity yielded four new compounds: two lignans 2, 6-dimethoxysavinin (**1**), 2,6-dimethoxy-(7*E*)-7,8-dehydroheliobupthalmin (**2**); and two fusicoccane diterpenoids: 11(12)-epoxyhypoestenone (**3**) and 3(11)-epoxyhypoestenone (**4**). The chemical structures were determined using various spectroscopic techniques: UV-vis, IR, CD, 1D, 2D and MS. Two fractions (RAO-43B and RAO-43D) and the isolated compounds were tested for activity against CQ susceptible (D6) and resistant (W2) *Plasmodium falciparum* parasite strains, *in vitro* and the IC₅₀ values determined. While the whole extract and some resultant fractions displayed moderate activity, the isolated compounds exhibited mild anti-plasmodial activity against the both strains ranging from IC₅₀ value of 328 μM in **1** to 93 μM in **3** against W2 strain.