



# Chemical constituents and biological investigations of the aerial parts of Egyptian *Clerodendrum inerme*

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## Abstract:

B-friedoolean-5-ene-3-b-ol (1), b-sitosterol (2), stigmasta-5,22,25-trien-3-b-ol (3), betulinic acid (4), and 5-hydroxy-6,7,40-trimethoxyflavone (5) were isolated from the aerial parts of *Clerodendrum inerme* L. (Verbenaceae). Their structures were established based on analyses of physical and spectroscopic data. Compounds 1, 4, and 5 were isolated for the first time from the plant. *C. inerme* L. was known as a rich source of terpenes, sterols, and phenolic compounds, so the antioxidant and anti-inflammatory activities were evaluated. The total methanolic extract (TME) and compound 5 showed scavenging activity with maximum inhibition of 61.84% for TME (100  $\mu$ g/mL) and 37.19% for 5 (20  $\mu$ M), respectively, using DPPH assay. In addition, the TME exhibited anti-inflammatory activity more than indomethacin at dose 200 mg/kg using the formalin induced hind paw edema method.

## Keywords:

*Clerodendrum inerme*; Verbenaceae; Triterpenes; Antioxidant; Anti-inflammatory

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