

Lipid profile and biological activity of different extracts of *Stapelia hirsuta* L.

*Mariam Abd Elhameid, M.M. Shabana a, M.H. Gonaid a, b, *, M.M. Salama, A.A. Sleem, E. Abdel-Sattar*

Abstract

Background: *Stapelia hirsuta* L. is a succulent ornamental plant. This study was aimed to investigate the lipid profile of its aerial parts in addition to, certain bioactivities of the different fractions obtained from its total alcohol extract which may be useful to scientists and scholars working in the field of pharmacology and therapeutics to develop evidence based alternative medicines.

Method: Four main compounds were isolated from the n-hexane extract of *Stapelia hirsuta* L. GLC analysis of the unsaponifiable matters (USM) and fatty acid methyl esters (FAME) were carried out. The total alcohol extract and its different fractions were subjected to certain biological screening including the following :LD50, analgesic, anti-inflammatory, antipyretic, anticonvulsant, anti-ulcerogenic and antimicrobial activities.

Results and conclusion: b-amyirin (1), lupeol (2), a-amyirin (3) and b-sitosterol (4) were isolated from the n-hexane extract. GLC analysis of (USM) and (FAME) revealed that, squalene, a-amyirin and b-sitosterol are the major hydrocarbon, triterpene and sterol respectively. The percentages of the unsaturated and saturated fatty acids are 40.8% and 48% respectively. Caproic acid (26.6%) was the major fatty acid and stearic (1.2%) being the minor one. Biological screening of the different extracts and fractions were carried out and significant results were obtained.

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