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A phytochemical and biological investigation of *Aloe grandidentata* Salm.-Dyck

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Abstract

The crude leaf extract of *Aloe grandidentata* was notably anti-inflammatory, chronic antihyperglycemic (100 mg/kg b.wt.) and a potent antimicrobial agent compared to standard positive drugs. Phytochemical studies of the leaf extract revealed the isolation and characterization of seven compounds; two new compounds; 1,1',8,8'-tetrahydroxy -3'- acetyl -3-methyl -5,5' bianthracene -9, 9',10,10'-tetraone (**2**), and 1,6,8-trihydroxy–7–methoxy–3- methyl anthraquinone (**3**) and five known compounds, *β*-sitosterol (**1**), emodin (**4**), chrysophanol (**5**), physicon (**6**) and *β*-sitosterol-3-*O*-*β*–D-glucoside (**7**). This is the first report of the isolation of emodin from genus *Aloe* and physicon from family Liliaceae. All structures of the isolated compounds were determined using several spectroscopic techniques; UV, IR, MS, NMR (^{1}H NMR and ^{13}C NMR) and by comparison with literature data.

Biography

Taghreed A. Ibrahim has obtained her M.Sc. and PhD degree in Pharmacognosy from Cairo University, Egypt. She is teaching pharmacognosy and phytochemistry courses for Bachelor, PharmD and postgraduate students in College of Pharmacy, King Saud University, Riyadh, KSA. Her research interests have been in the broad area of traditional herbal medicine and natural products. She is the director of Quality Unit, College of Pharmacy, King Saud University. She has published more than 25 papers in reputed journals. She is a member and reviewer of several societies and journals and has been serving as an editorial board member of repute journals.