

Abstract

Project Code: MRG5680006

Project Title: Chemical Constituents and Biological Activities of *Dasymaschalon acuminatum*, the New Plant Species

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Phytochemical investigation of the leaves and twigs of *Dasymaschalon acuminatum* led to the isolation of two new aporphine alkaloid, 7-*epi*-duguetine (**1**) and 7-(*O*)-acetylduguetine (**7**) together with one known alkaloid, dicentrinone (**2**), and five known flavonoids, quercetin 3,7-dimethyl ether 3'-*O*- α -L-rhamnopyranosyl-(1 \rightarrow 2)- β -D-glucopyranoside (**3**), galangin 5-methyl ether (**4**), 5,7-dimethoxy-3-hydroxyflavone (**5**), 3,5,7-trimethoxyflavone (**6**) and (-)-epicatechin (**8**), were isolated from the leaves and twigs of *Dasymaschalon acuminatum*, a new plant species which has not been investigated phytochemically before. The structures of the new compounds were elucidated by spectroscopic techniques and the known compounds were identified by comparison of the spectroscopic and physical data with those of reported values. All isolates were evaluated for antiplasmodial activity against *Plasmodium falciparum* strain K1 and 7-(*O*)-acetylduguetine and 7-*epi*-duguetine were found to exhibit potent activity with an IC₅₀ of 0.243 and 0.385 μ g/ml, respectively.

Keywords : *Dasymaschalon acuminatum*; alkaloid; flavonoid; antiplasmodial activity.