HPLC-UV/PAD and HPLC-MSn analyses of leaf and root extracts of Vismia guineensis and isolation and identification of two new bianthrones

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Résumé en anglais
In order to evaluate the possible use of the leaves instead of the roots of Vismia guineensis as a new source for the traditional use of this drug, the chemical composition of both organs were compared by HPLC-UV/PAD and HPLC-MS analyses. The leaves are analysed here for the first time. The results show the presence of five major classes of secondary metabolites having specific chromophores: anthraquinones, vismiones, flavonoids, xanthones and benzophenones. The molecular weights and characteristic fragments, compared with previous EI or HPLC-MS literature data, allowed the partial identification of the major peaks in the chromatograms. Six additional isomeric bianthrones and one anthraquinone were detected in the dichloromethane extract of the roots after long storage in solution; the targeted isolation of the bianthrones was performed and enabled the identification of two original C-geranyl derivatives. The chemical compositions of the extracts demonstrated that only a minority of the constituents is shared by both organs. Thus, in order to establish a definitive phytoequivalence, additional pharmacological investigations are required.

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