Phytochemical analysis of Ipomoea involucrata

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Further Information

Publication History

Publication Date: 14 December 2016 (online)

- Congress Abstract
- Full Text

We have recently reported that methanolic extracts from Ipomoea involucrata P. Beauv. (Convolvulaceae) exhibited particular antiscickling properties coupled with the potential to reverse sickled blood and reduce stress in sickle cell patients [1]. In light of its possible medicinal benefits the MeOH plant extract was analysed for twenty bioactives by high performance liquid chromatographic (HPLC) equipped with UV-detector. Chlorogenic acid (33.72 ± 0.24 mg/g, dry wt. leaves), ferulic acid (15.60 ± 3.46 mg/g, dry wt. leaves), hesperidin (6.71 ± 1.57 mg/g, dry wt. leaves), rutin (6.55 ± 0.09 mg/g, dry wt. leaves), resveratrol (2.54 ± 0.28 mg/g, dry wt. leaves), coumaric acid (1.75 ± 0.17 mg/g, dry wt. leaves), myricetin (1.70 ± 0.00 mg/g, dry wt. leaves), kaempferol (0.93 ± 0.71 mg/g, dry wt. leaves) and rutin (0.80 ± 0.43 mg/g, dry wt. leaves) were the nine bioactives detected. The high levels of the major compounds (chlorogenic acid, ferulic acid and hesperidin) were similar to that of leaves of other Ipomoea sp [2 – 4]. Hesperidin was first reported in this study among the Ipomoea sp. The leaves have relatively higher levels of coumaric acid than I. mauritiana; ferulic acid, resveratrol and lutein than I. batatas; and similar levels of myricetin to that in I. batatas [2, 5 – 6]. Ferulic acid in I. hederacea, myricetin in I. aquatica, rutin in I. batatas; and coumarin in I. cinerea, Ipomoea digitata L., Ipomoea hederaecea, I. pes-caprae, I. pes-tigrisidis, I. sepia and I. batatas were also detected but not quantified [3]. The identified compounds could significantly contribute to the medicinal properties of the plant [3]. A future investigation will carry out to evaluate the antiscickling properties coupled with the potential to reduce stress in sickle cell patients of the isolated constituents.
Fig. 1: Bioactive constituents in leaves of Ipomoea involucrata

Acknowledgements: The authors acknowledge Professor Ogi Okwumabua, of the University of Wisconsin, Madison, USA for facilitating the procurement of the standards used for this study. The financial support of Mr. Isaiah Awogbindin, Pastor P. A. Jotiaoluwa, and Rev. David Amosun of Victory Tabernacle Church, Lagos, are also highly appreciated.

Keywords: Ipomoea involucrata, molecules, bioactive, therapeutic, health.

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