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Chemical profile, total phenolic content, DPPH free radical scavenging and α-glucosidase inhibitory activities of cosmos caudatus kunth leaves (Article)

Ahmad, W.N.W.[a], Shaari, K.[a], Khatib, A.[b], Hamid, A.A.[c], Hamid, M.[d]

[a]Laboratory of Natural Products, Institute of Bioscience, Universiti Putra Malaysia (UPM), Serdang, Selangor, 43400, Malaysia
[b]Kuliyyah of Pharmacy, International Islamic University Malaysia (IIUM), Kuantan, Pahang, 25200, Malaysia
[c]Faculty of Food Science and Technology, Universiti Putra Malaysia (UPM), Serdang, Selangor, 43400, Malaysia

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Abstract

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Herbs and medicinal plants are major sources of traditional or folk medicines for many countries of the world, including Malaysia. This study evaluated the bioactive potential of the leaf ethanolic extract and solvent fractions of Cosmos caudatus Kunth, in scavenging free radicals and inhibiting the enzyme α-glucosidase. In addition, their metabolite profiles were also characterized using liquid chromatography-mass spectrometry. The bioactivity was found to be concentrated in the EtOAc and BuOH fractions which largely contained rutin, quercetin 3-O-galactoside, quercetin 3-O-glucoside, quercetin 3-O-xyloside, quercetin 3-O-arabinofuranoside, quercetin 3-O-rhamnoside, and quercetin 3-O-galactoside, as profiled by LC-MS/MS. It was further shown that the flavonoids glycosides contributed to the free radical scavenging and glucose lowering effects of C. caudatus leaves. The results indicated that the leaves of C. caudatus are a rich source of bioactive compounds and could be prospective materials for development of new anti-diabetic agents. © 2018 Universiti Putra Malaysia Press.

SciVal Topic Prominence

Topic: Oenanthe | Quercetin | C caudatus

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Reaxys Database Information

View Compounds

Author keywords

Cosmos caudatus | Free radical scavenging activity | LC-MS/ MS | α-glucosidase inhibition

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Shaari, K.; Laboratory of Natural Products, Institute of Bioscience, Universiti Putra Malaysia (UPM), Serdang, Selangor, Malaysia; email:khozirah@upm.edu.my