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Phytochemical constituents and pharmacological properties of Garcinia xanthochymus - a review (Review)

Che Hassan, N.K.N.[a], Taher, M.[a], Susanti, D.[b]

[a]Department of Pharmaceutical Technology, Faculty of Pharmacy, International Islamic University Malaysia, Jalan Sultan Ahmad Shah, Kuantan, Pahang, Malaysia
[b]Department of Chemistry, Faculty of Science, International Islamic University Malaysia, Jalan Sultan Ahmad Shah, Kuantan, Pahang, Malaysia

Abstract

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The purpose of this study was to determine the phytochemical constituents and pharmacological properties of Garcinia xanthochymus which is commonly known as gamboge, yellow mangosteen and false mangosteen. The phytochemicals constituents , pharmacological benefits and their mechanisms were previously presented in a number of studies including in vitro and in vivo studies from published books, journals and articles. The literature used in this review were published between 1970 and 2017 and were available from databases such as Google Scholar, ScienceDirect, Scopus, PubMed, ProQuest and others. The chemical structures in this paper are drawn using ChemBio Ultra 14.0. G. xanthocymus contains many phytochemicals that can be extracted from its constituent parts; the bark, fruits, leaves, roots, twigs and seeds. The predominant extracted phytochemicals are xanthones, benzophenones, flavonoids, depsidones and isocoumarins. These phytochemicals contribute to the pharmacological activities of this plant as an antioxidant, antidiabetic, and for having Nerve Growth Factor-potentiating, antimicrobial and cytotoxic activities. This species contains a broad range of phytochemicals with curative properties that can be greatly beneficial to man. Notably, this review focused on those studies of the pharmacological effects of this plant that were concentrated on by previous researchers. Thus, further study needs to be done on G. xanthocymus in order to unlock additional potential activities and to pinpoint the exact mechanisms of how these activities can be induced, leading to new drug discoveries which have fewer side effects. © 2018 Elsevier Masson SAS

Author keywords

Bioactivities | Garcinia xanthocymus | Guttiferae | Phytochemistry

Indexed keywords

EMTREE drug terms: benzophenone derivative | flavonoid | herbaceous agent | isocoumarin derivative | nerve growth factor | xanthone derivative

EMTREE medical terms: antidiabetic activity | antiinflammatory activity | antimicrobial activity | antioxidant activity | bark | chemical composition | chemical structure | cytotoxicity | Garcinia | Garcinia xanthochymus | human | nonhuman | plant leaf | plant root | plant seed | priority journal | Review | twig

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Taher, M.; Department of Pharmaceutical Technology, Faculty of Pharmacy, International Islamic University Malaysia, Jalan Sultan Ahmad Shah, Kuantan, Pahang, Malaysia; email:mtaher@iium.edu.my