Phytochemical study and biological evaluation of the stem of Derris ferruginea Bentham

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Résumé en anglais

The genus *Derris* Loureiro belongs to the tribe Milletiae of the Leguminosae. It includes about fifteen species widely found in the tropical areas of Africa and Asia [1]. These plants have been traditionally used over centuries as fish poisoning, insecticide and pesticide, particularly due to their large production of rotenone [2]. Biological activities of *Derris* species are various: cytotoxic, antibacterial, antifungal, and antioxidant [3,4,5]. Though major secondary metabolites found in the genus are known to be flavonoids, including prenylated flavanones, and isoflavonoids such as rotenoids, very few phytochemical informations were available on *D. ferruginea* [6].
Different crude extracts were obtained from the stem (2kg, Soxhlet apparatus). They were fractionated using successively MPLC, LC, FCPC® (Fast Centrifugal Partition Chromatography, Kromaton Angers), Sephadex LH-20® gel and finally purified on preparative HPLC. Chemical structures of the isolated compounds were elucidated using ^{1}H and ^{13}C NMR spectrum as well as Mass Spectrometry. Most of these compounds were identified as prenylated flavonoids (flavanones and isoflavonoids). Biological effects of these compounds will be reported here, particularly antimicrobial, antiparasitic activities and inhibition of the formation of AGEs (Advanced Glycation End Products involved in age- and diabetes-related chronic diseases).

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