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[Lab. of Pharmacognosy]

A prenylated Flavanone from Roots of *Maackia amurensis* subsp. *buengeri*.

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Maackia amurensis subsp. *buengeri* (Leguminosae) is a deciduous tree widely distributed in Eastern Asia. A prenylated flavanone was isolated from the roots of the plant in addition to seven known compounds, daidzein, formononetin, ononin, maackiain, trifolirhizin, isomedicarpin 9-O-glucoside and 5-hydroxysophoranone. The structure of the new flavanone was characterized as 8,5'-diisoprenyl-5,2',4'-trihydroxy-7-methoxyflavanone (maackiaflavanone).

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[Lab. of Pharmacognosy]

2,3-Secogermacranolides and Germacranolides from *Pyrethrum santolionoides*.

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Previous study on the chemical constituents of *Pyrethrum santolionoides* (Compositae) led to the isolation of hydroridentin, erivanin, heliangolides and some germacranolides from the aerial parts and various compounds including malabaricane-triterpene derivative from the root. Re-investigation of the chemical constituents of the aerial parts of *P. santolionoides* gave six new sesquiterpene lactones (two 2,3-secogermacranolids and four germacranolides) in addition to eight known compounds. These structures were determined by spectroscopic analysis.

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[Lab. of Pharmacognosy]

Flavonoids in Frond Exudate of *Pityrogramma tartarea*.

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From the frond exudate of *Pityrogramma tartarea*, a new dihydrochalcone, 2,6'-dihydroxy-3,4,4'-trimethoxydihydrochalcone, and five complex flavonoids (D-2, D-2/a, calomelanols, D, F and H) were isolated in addition to three known chalcones, three dihydrochalcones and three flavanones. Naturally occurring compounds which are assumed to be transformed from secondary metabolites in vitro by physical factors as found in exudate of species, such as *Pityrogramma*, *Pentagramma*, *Primula* etc., are defined as tertiary metabolites.