

[Shoyakugaku Zasshi, 47, 156-164 (1993)]

[Lab. of Herbal Garden]

Pharmacognostical Studies of Crataegus Fructus (I) Flavonoids Contents in the Plants of *Crataegus* spp..TOMOKO KAWAMURA, YOUICHI HISATA, KAZUYO OKUDA, YUKIO NORO,
TOSHIHIRO TANAKA*, ATSUSHI TAKADA, SANSEI NISHIBE and ZHU YOU-CHANG

The main flavonoids in the leaves, flowers and fruits of *Crataegus* spp. were quantitatively determined by HPLC, *i. e.* hyperoside(1), vitexin-2"-rhamnoside(2), vitexin, isoquercitrin(3), vitexin-2"-rhamnoside-4'''-acetyl(4). The total amounts of flavonoids in the leaves and flowers were large, and those in the fruits were small. Leaves of *C.monogyna* contained a large total amount of flavonoids and had high 1, 2 and 4 contents. 4 was absent in the leaves of the other species tested. The fruits of *Crataegus* spp. mainly contained 1 and 3. The medicinal preparations of *Crataegus* extracts were found to have varieties total flavonoid contents and the compositions.

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Studies on Constituents of Plantaginis Herba 4. on Phenylethanoid Glycosides of *Plantago camtschatica*.

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Eight known phenylethanoid glycosides, cistanoid F, desrhamnosyllacteoside, β -hydroxyacteoside, campneoside I, acteoside, orobanchoside, β -oxoacteoside and isoacteoside, were isolated from the aerial parts of *Plantago camtschatica*. The chemical constituents of the aerial part of the plant were similar to those of *P.depressa*, the original plant of Plantaginis Herba described in Chinese Pharmacopeia. We also studied the chemical structure of orobanchoside and considered that it was to be revised.

[Phytochemistry, 23, 975-977 (1993)]

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Phenylethanoid Glycosides from *Plantago depressa*

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The five known phenylethanoid glycosides, cistanoid F, β -hydroxyacteoside, campenoside I, acteoside and orobanchoside, and a new phenylethanoid glycoside, were isolated from the aerial parts of *Plantago depressa*. The structure of β -oxoacteoside was deduced from chemical and spectral evidence to be β -oro- β -(3,4-dihydroxyphenyl)-ethyl-*O*- α -L-rhamnopyranosyl-(1 \rightarrow 3)- β -D-(4-*O*-caffeonyl)-glucopyranoside.