

[Shoyakugaku Zasshi, 46, 254-256 (1992)]

[Lab. of Herbal Garden]

Phenylethanoid Glycoside in the Leaves of *Forsythia* spp.

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The leaves of *Forsythia* spp. contain four phenylethanoid glycosides, *i.e.* forsythiaside, suspesaside, acteoside and β -hydroxyacteoside. In this paper, these glycoside contents of the leaves of eight *Forsythia* spp. were determined by HPLC. According the results, these 8 species were divided into two groupes, *i.e.* the first group consisting of *F. suspensa*, *F. europaea*, *F. koreana* and *F. intermedia*, mainly containg forsythiaside and the second one consisting of *F. viridissima*, *F. japonica*, *F. ovata* and *F. giraldiana* mainly containing acteoside. The phenylethanoid contents in the leaves of the first group varied considerably among the species. The leaves of the second group contained neither forsythiaside.

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[Lab. of Herbal Garden]

Studies of Constituents of Plantaginis Herba on Phenolic and Iridoid Components of *Plantago hostifolia*.

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Four phenolic compounds, plantamajoside, isoplantamajoside, 3,4-dihydroxyphenyl alcohol-6-*O*-caffeoyl- β -D-glucoside and plantagin, in addition to aucubin were isolated from the whole plants of *Plantago hostifolia*, imported from China as Plantaginis Herba. The phenolic and iridoid components of *P. hostifolia* were similar to those of *P. asiatica*, the original plant of Plantaginis Herba described in JP XII. Isoplantamajoside (3,4-dihydroxyphenethyl-*O*- β -D-glucopyranosyl-(1 \rightarrow 3)-6-*O*-caffeoyl- β -D-glucopyranoside), obtained in this work, however, might be an artifact formed from plantamajoside by acy immigration during extraction procedures.

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[Lab. of Radioisotope]

Low susceptibility of nude mice to induction of invasive urinary bladder cancers by *N*-Ethyl-*N*-(4-hydroxybutyl) nitrosamine (EHBN).

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In order to ascertain whether the difference in cancer incidence between nude and B6C3F₁ mice was due to variation in urinary excretion, the metabolism of EHBN was investigated and compared with that of *N*-butyl-*N*-(4-hydroxybutyl) nitrosamine. Respective total urinary excretions over 48 hr of *N*-ethyl-*N*-(3-carboxypropyl) nitrosamine or *N*-butyl-*N*-(3-carboxypropyl) nitrosamine, the ultimate carcinogenic species, were $822.4 \pm 41.4 \mu\text{g}$ and $530.4 \pm 81.0 \mu\text{g}$, respectively, in nude mice, and $800.6 \pm 83.7 \mu\text{g}$ and $407.8 \pm 69.7 \mu\text{g}$, respectively, in B6C3F₁ mice, indicating that it dose not appear to be dependent on reduced metabolism to the active form.