〔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.

〔Shoyakugaku Zasshi, **46**, 268-272 (1992)〕 [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 plantaginin, 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→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.

〔Toxicologic Pathology, **20**, 205-211 (1992)〕 [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±41.4 μg and 530.4±81.0 μg, respectively, in nude mice, and 800.6±83.7 μg and 407.8±69.7 μg, respectively, in B6C3F1 mice, indicating that it dose not appear to be dependent on reduced metabolism to the active form.