

[Shoyakugaku Zasshi, 44, 17 (1990)]

**Pharmacognostical Studies of Plantaginis Herba (5). On the Aucubin Contents of *Plantago* spp.**

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For the quality evaluation of *Plantaginis Herba*, we conducted a quantitative analysis of aucubin by extracting the powdered material with 50% MeOH using sonication and subjecting the extracted liquid to HPLC. In the case of *P. asiatica*, the aucubin content is high in the underground part and low in the terrestrial part. The younger leaves contained more aucubin than older leaves adjacent to the rhizome, and the leaves turning yellow contain little aucubin. On *Plantago* spp. collected in Japan, *P. camtschatica* contains a large amount of aucubin, *P. major*, a very small amount of it and *P. japonica* no aucubin.

[Shoyakugaku Zasshi, 44, 117 (1990)]

**Comparative Studies on the Constituents of *Ophiopogon* Tuber and Its Congenes (Part V) Studies on the Constituents of the Subterranean Part of *Ophiopogon chekiangensis***

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Chemical constituents of the subterranean parts of *O. chekiangensis* were examined. Isolated were 13 known compounds, six steroidal glycosides, seven homoisoflavonoids and new steroidal glycoside (SG-2), the structure of which was characterised as ruscogenin 1-O- 2-O-actyl- $\alpha$ -L-rhamnopyranosyl (1 $\rightarrow$ 2)-[ $\beta$ -D-xylopyranosyl(1 $\rightarrow$ 3)]- $\beta$ -D-fucopyranoside on the basis of its chemical and spectroscopic data. The results suggest that chemotaxonomically *O. chekiangensis* is identical with neither *O. japonica* nor *O. ohwii*, though it is more closely related to latter species.

[Shoyakugaku Zasshi, 44, 145 (1990)]

**Pharmacognostical Studies of Plantaginis Herba (6) Anatomy of *Plantago major* in Hokkaido.**

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In Sapporo City both *Plantago major* and *P. asiatica* are widely found. There is a possibility that *P. major* or its seeds are erroneously mixed with proper plantaginis herba or plantaginis semen. So, this comparative anatomical research was conducted. In *P. major*, the seeds were small, the number of seeds per one capsule was  $12.5 \pm 1.7$  and the pigment layer cells of the seeds were rectangular in shape. The epidermal cells of the leaves of *P. major* were smaller, the endodermis of the petiole and the vein of the leaf blades were thinner and the numbers of the epidermal cells and of the stomata per unit square were higher than the corresponding ones of *P. asiatica*.