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[Lab. of Herbal Garden]

**Pharmacognostical Studies of Iridaceae (1) Morphological and Histological
Studies of “Shegan(射干)” and Relative Crude Drug from China**

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“Shegan(射干)” is a traditional Chinese medicine, used for treatment of pharyngitis, cough, flu, etc.. A comparative anatomical studies of *Belamcanda chinensis* (L.) DC. and 4 species of *Iris*, morphologically resembling “Shegan,” showed that the characteristics of the epidermis, cork layer, endodermis, fiber layer, the type of vascular bundle sheath, width and density of calcium oxalate crystals, could be used for the identification of the 5 species. On the basis of the results, 27 samples of commercial Shegan samples of China were comparatively examined: 17 samples were derived from rhizome of *B.chinensis*, 9 samples from that of *I.tectorum* and 1 sample from a mixture of rhizomes of *B.chinensis* and *I.dichotoma*. In most regions of China, the botanical origin of “Shegan” was *B.chinensis* but in Sichuan province, it was *I.tectorum*.

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Comparison of the Constituents of Ephedra Herb from Various Countries On Ephedrine Type Alkaloids

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Ephedra herbs, imported from China, HongKong, Pakistan and Russia (including old USSR) in the past 19 years were assayed for their ephedrine-type alkaloid contents by HPLC. No regional differences were observed in the total alkaloid contents among the crude drugs from different places. Most of the crude drug samples contained ephedrine and pseudoephedrine as the main alkaloids, but some contained considerable amounts of norephedrine and methylephedrine. Regional differences were observed, in the alkaloid composition. The ratio of the pseudoephedrine content to the alkaloid content was higher in the *Ephedra* herb from Kansu Province (甘肅省) and Chinghai Province (青海省) in China.

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Study of “Bishu Yakuen Ransho-Roku (The Origin of Herb Garden in Owari Clan)”

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“Bishu Yakuen Ransho-Roku(the origin of herb garden in Owari clan)” in the possession of the Insutitution of Tokugawa Rinseishi in Tokyo. This paper was written about the origin of the herb garden established by Mr. Shinken Mimura, an herbalist in the Owari clan between 1735 and 1746. Mr. Shinken Mimura cultivated ginseng by according to the guide issued by the shogunate, but he found the methods unsuitable. Therefore, he made efforts to improve the cultivation of ginseng. As a result, he succeeded in the cultivation of good ginseng. He had contributed to the development of the production of ginseng in the Owari clan. He wrote this document so that this methods could be handed down for posterity. This document has two parts: one is the growth of ginseng in the form of a diary and the other is the conditions of cultivation as to seeding, fertilization, the counter-measures for damage due to blight and insects, and so on.