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As an attempt to search for bioactive natural constituents exerting antinociceptive and antiinflammatory activities, we examined the potency of the extract of *R. coreanus* fruits by the activity-guided fractionation. The EtOAc- and BuOH fraction and those alkaline hydrolysates showed significant antinociceptive effects as assessed by writhing-, hot plate- and tail flicks tests in mice and rats as well as antiinflammatory effect in rats with carrageenan-induced edema. BuOH extract was subjected to column chromatography to obtain a large amount of niga-ichigoside F₁ (1, 23-hydroxytormentic acid 28-O-glc), which was again hydrolyzed in NaOH solution to yield an aglycone 23-hydroxytormentic acid (1a). The aglycone, 23-hydroxytormentic acid, was much more potent in both antinociceptive and antiinflammatory tests than the glycoside, niga-ichigoside F₁. The antiinflammatory effects of these compounds were further supported by the reduction of carrageenan-induced lipid peroxidation and hydroxyl radical in serum. These results suggested that 23-hydroxytormentic acid might be an active moiety of niga-ichigoside F₁ present in *R. coreanus*.

[PD2-28] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Phytochemical Constituents from *Saussurea nutans*

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As part of our systematic study for Korean Compositae plants, we have studied *Saussurea nutans*, collected at Gangwon Province on August 2001. Phytochemical studies on various species of genus *Saussurea* have resulted in the isolation sesquiterpene, triterpene and flavonoid¹⁾. *S. nutans* has been used for the treatment of rheumatic arthritis and dysmenorrhea in the Chinese folk medicine²⁾. However, chemical constituents of this plant have not been reported until now. The MeOH extract of the aerial parts of this source was solvent fractionated into n-hexane, methylene chloride, ethyl acetate and BuOH soluble portions. The repeated column chromatographic separation of the n-hexane layer resulted in the isolation of seven terpenoids and three lipid glycerols. Structures of the isolated compounds have been established by chemical and spectroscopic means. In this poster, we demonstrate the isolation and the structure determination of the compounds from n-hexane soluble portion of *Saussurea nutans*. 1) Duan, H., Takaishi, Y., Momota, H., Ohmoto, Y., Taki, T., Immunosuppressive constituents from *Saussurea medusa*. *Phytochemistry*, 59, 85-90 (2002) 2) Fan, C. Q. and Yue, J. M., Biologically active phenols from *Saussurea medusa*. *Bioorg. Med. Chem.*, 11, 1-6 (2003)

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Anti-Oxidant Activities of Fucosterol from *Pelvetia siliquosa*

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The anti-oxidant activities of fucosterol isolated from the marine algae *Pelvetia siliquosa* were investigated. Fucosterol exhibited a significant decrease in serum transaminase activities elevated by hepatic damage induced by CCl₄-intoxication in rats. Fucosterol inhibited the sGOT and sGPT activities by 25.57 and 63.16%, respectively. Fucosterol showed the increase in the anti-oxidant enzymes such as hepatic cytosolic superoxide dismutase, catalase and glutathione peroxidase activities by 33.89, 21.56 and 39.24%, respectively, in CCl₄-intoxicated rats. These results suggest that fucosterol possess not only the anti-oxidant, but also the hepatoprotective activities in rats.

[PD2-30] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]