DA-8159, a new phosphodiesterase 5 inhibitor, was assessed for its erectogenic potential by a penile erection test in rats, the relaxation of isolated rabbit corpus cavernosum , and estimation of the intracavernous pressure in the anesthetized dog. Oral administration of DA-8159 (0.3 to 10 mg/kg) increased the number of erections in rats with increasing dosage, with the highest penile erection index at 10 mg/kg. DA-8159 induced the relaxation of phenylephrine-induced contractions in the rabbit corpus cavernosal smooth muscle and decreased the IC50 of the nitric oxide donor sodium nitroprusside in a dose-dependent fashion. In pentobarbital- anesthetized dogs, the intravenous administration of DA-8159 (1 ~ 300 μg/kg) potentiated the increase in intracavernosal pressure induced by the intracavernosal sodium nitroprusside in a dose-related manner. These findings suggest that DA-8159 has significant therapeutic potential in the treatment of erectile dysfunction.

[PA1-13] [10/18/2001 (Thr) 14:00 - 17:00 / Hall D]

Antifibrogenic effect of butein in carbon tetrachloride-induced rat liver fibrosis

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Butein (3, 4, 2', 4'-tetrahydroxychalcone) is a chalcone compound belonging to the flavonoid subclass. The aim of this work was to investigate the effect of butein on liver fibrosis by induced carbon tetrachloride (CCl_4) in rats and to explore its antifibrotic mechanism.

Liver hydroxyproline content, malondialdehyde level, hisoto- and immunohistopathology and collagen type I and tissue inhibitor of metalloproteinase-1 (TIMP-1) mRNA expression were assessed. Butein (10 mg/kg/day or 25 mg/kg/day)-treated fibrotic rats showed a significant reduction in hydroxyproline content and malondialdehyde level. Smooth muscle α-actin expression was also decreased in rats treated with butein, which indicates inhibition of hepatic stellate cell (HSC) activation. The expression of α_1(I) collagen and TIMP-1 mRNA in liver was clearly decreased in rats given butein compared with control CCl_4 rats, dose-dependently. In summary, treatment with butein reduced all of the studied parameters of fibrogenesis.
In conclusion, butein prevent liver fibrosis by suppressing the expression of TIMP-1 mRNA of HSC in fibrogenesis, resulting in reduce expression of collagen mRNA.

[PA1-14] [10/18/2001 (Thr) 14:00 - 17:00 / Hall D]

Benzylamide derivative compound attenuates ultraviolet-induced hyperpigmentation of the skin

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This study was conducted to evaluate the effects of benzylamide derivative, SY 010 compound on ultraviolet B (UVB)-induced hyperpigmentation of the skin. UVB-induced hyperpigmentation was elicited on the skin of brownish guinea pigs according to the method of Hideya et al. with modifications. A lightening effect was observed following topical application of the compound on UV-stimulated hyperpigmented dorsal skin of brownish guinea pigs. A visible decrease in hyperpigmentation was observed at the sites treated with the compound for 2 weeks, as compared with control. After 8 weeks of treatment with the compound, the skin recovered to its original color. The production of melanin in the pigmented area and the number of melanocytes were significantly decreased in the compound treated animals, as assessed by using Fontana-masson and S-100 stain. In vitro experiments using cultured melanoma cells showed that 30% inhibition of melanin production by compound at 100 ppm. But, the compound had no effect on the mushroom tyrosinase activity.