

week for 9 weeks. During the treatment of BPA, the food uptake and body weight increase were not significantly changed. BPA resulted in the increased stereotype behaviors (jumping rearing and forepaw tremor) 6 or 9 weeks after treatment. The time response to tail flick and locomotor activity were decreased by the treatment of BPA, whereas the time for rotarod was increased by the treatment of BPA. The expression of estrogen receptor alpha and beta was increased in the brain and pituitary gland. Maximum expression was found in the rat brain after 9 week of 100 mg/kg BPA treatment and in the pituitary gland after 6 week of 100 mg/kg BPA treatment. Tyrosine hydroxylase was increased in dose and time dependent manners in the brain. The present data show that exposure of BPA in the young rats could alter expression estrogen receptors and dopamine synthesis pathway, thereby modulate neuro-behavior patterns (increase of stereotype behaviors but decrease locomotors activity).

[PA1-20] [ 04/17/2003 (Thr) 14:00 – 17:00 / Hall P ]

### Further Triterpene Glycosides from *Echinosophora koreensis*

Byun Ji Hye<sup>o</sup>, Kim Ju Sun, Kang Sam Sik

Natural Products Research Institute and College of Pharmacy, Seoul National University

We have previously reported three new oleanene-type glycosides and kudzusaponin A<sub>3</sub> methyl ester and subproside II methyl ester from the roots of *Echinosophora koreensis*. Further study has now led to the isolation of three known oleanen-type glycosides, sophoraflavoside I , azukisaponin V , and kudzusaponin SA<sub>3</sub> as their methyl esters. The structures of these compounds were characterized by spectroscopic and chemical methods.

[PA1-21] [ 04/17/2003 (Thr) 14:00 – 17:00 / Hall P ]

### Regulatory Effect of Atopic Allergic Reaction by *Pachydictyon coriaceum*

Na HoJeong<sup>o</sup>, Moon PhilDong, Hong SeungHeon, Seo YoungWan, Kim HyungMin

Department of Oriental Pharmacy, Wonkwang University, Division of Ocean Science, Korea Maritime University, Department of Pharmacology, College of Oriental Medicin, Kyung Hee University

We studied the effect of methanol extract of *Pachydictyon coriaceum* (PC) on atopic allergic reaction. PC dose-dependently inhibited interleukin (IL)-8 and tumor necrosis factor (TNF)- $\alpha$  secretion from the PMA- plus A23187- stimulated HMC-1. PC also dose-dependently inhibited the histamine and  $\beta$ -hexosaminidase release from mast cells. PC had no cytotoxic effect. These results suggest that PC has the inhibitory effect of atopic allergic reaction and this might be useful for clinical application to treat several allergic diseases such as atopic dermatitis.

[PA1-22] [ 04/17/2003 (Thr) 14:00 – 17:00 / Hall P ]

### Enhancement of nerve growth factor production and release by buthanol fraction of *Liriope platyphylla* in C6 cells and rat cultured astrocyte

Hur Jinyoung<sup>o</sup>, Pyeongjae Lee, Jeongmin Kim, Hocheol Kim, Sun Yeou Kim

Department of Herbal Pharmacology, Graduate School of East-West Medical Science, Kyung Hee University, 1 Hoegi-dong, Tongdaemun-ku, Seoul 130-701, Korea

Liriope platyphylla (LP) Wang et Tang has been used for tonic, anti-tussive and expectorant in Korea. In the current study, we found that buthanol fraction of Liriope platyphylla-conditioned media of C6 and primary astrocyte induced the neurite outgrowth of PC 12 cells, which effect was reversed by addition of NGF-antibody. We demonstrated that buthanol fraction of Liriope platyphylla increased the expression and secretion of NGF through RT-PCR and ELISA. Taken together, our results suggested that NGF enhanced by buthanol fraction of Liriope platyphylla was responsible for induction of neurite outgrowth of PC 12 cells. We also investigated the effect of this extract on the phosphorylation of MAPkinase (Erk1/2), which plays a crucial role in the survival and differentiation of neurons. Buthanol fraction of LP increased MAP kinase activity in PC12 cells, and probably activated MAP kinase signal pathway to cause neurite outgrowth. These neurotrophic effects on PC12 cells were inhibited by PD98059, which blocks NGF action by inhibition of MAP kinase cascade. These result suggest that buthanol fraction of LP may have neurotrophic like action as well as neurotrophic inducers by activation of Trk tyrosine kinase downstream.

[PA1-23] [ 04/17/2003 (Thr) 14:00 - 17:00 / Hall P ]

### Regulatory Effect of Atopic Allergic Reaction by *Sargassum hemiphylum*

Na HoJeong<sup>o</sup>, Moon PhilDong, Hong SeungHeon, Seo YoungWan, Kim HyungMin

Department of Oriental Pharmacy, College of Pharmacy, Department of Anatomy, College of Medicine, Wonkwang University, Division of Ocean Science, Korea Maritime University, Department of Pharmacology, College of Oriental Medicine, Kyung Hee University k

We studied the effect of methanol extract of *Sargassum hemiphylum*(SH) on atopic allergic reaction. SH dose-dependently inhibited interleukin (IL)-8 and tumor necrosis factor (TNF)- $\alpha$  secretion from the PMA- plus A23187- stimulated HMC-1. SH also dose-dependently inhibited the histamine and  $\beta$ -hexosaminidase release from mast cells. In addition, SH (0.1 mg/ml) decreased NF- $\kappa$ B activation (about 7 fold) compared with untreated 293 T cells. SH had no cytotoxic effect. These results suggest that SH has the inhibitory effect of atopic allergic reaction and this might be useful for clinical application to treat several allergic diseases such as atopic dermatitis.

[PA1-24] [ 04/17/2003 (Thr) 14:00 - 17:00 / Hall P ]

### Inhibitory Effect of Rat Aortic Vascular Smooth Muscle Cell Proliferation by Luteolin

Kim JinHo<sup>o</sup>, Kim SooYeon, Lim Yong, Park ByeoungSoo, Pyo HyeongBae, Yoo HwanSoo, Yun YeoPyo

College of Pharmacy, Chungbuk National University, Cheongju, Korea; School of Agricultural Biotechnology, Seoul National University, Suwon 441-744, Korea

It was previously reported that luteolin, a flavone compound, displayed the potent anti-oxidant and anti-inflammatory effects, which have also been successful in reducing vascular smooth muscle cells (VSMCs) proliferation after arterial injury. Proliferation of VSMCs plays an important role in development of atherosclerosis. In this study, a possible anti-proliferative effect and its