

[PD2-45] [ 04/20/2001 (Fri) 13:30 – 14:30 / Hall 4 ]

### Immuno-modulatory activity of the polysaccharide from the fruits of *Acanthopanax sessiliflorum*

Ji J<sup>1</sup>°, Lee SH<sup>1</sup>, Shin KH<sup>1</sup>, Ban HS<sup>2</sup>, Ohuchi K<sup>2</sup> and Cho SH<sup>3</sup>

<sup>1</sup>Natural Products Research Institute Seoul National University <sup>2</sup>Laboratory of Pathophysiological Biochemistry, Graduate School of Pharmaceutical Sciences, Tohoku University, Japan <sup>3</sup> Kong Ju University of Education

As part of the evaluation of biologically active principles from the fruits of *Acanthopanax sessiliflorum*, various fractions obtained from this plant parts were tested for their effects on immunological functions *in vitro* and *in vivo* in mice and rats.

Among fractions tested, the polysaccharide fraction only was demonstrated to exhibit a significant increase in NO production both in the presence and the absence of LPS as well as a significant increase in acid phosphatase activities at 100µg/ml in murine macrophages *in vitro*. The polysaccharides, when administered orally at a dose of 50 mg/kg, also caused a significant enhancement of phagocytosis in carbon clearance test in mice. These results suggested that the polysaccharide is an immuno-modulatory principle of the fruits of *Acanthopanax sessiliflorum*.

[PD2-46] [ 04/20/2001 (Fri) 13:30 – 14:30 / Hall 4 ]

### Constituents of the Essential Oil of the Cinnamomum cassia Stem bark and the Biological Properties

Choi JW<sup>1</sup>, Lee KT<sup>2</sup>, Ka H<sup>2</sup>, Jung WT<sup>3</sup>, Kwon SH<sup>4</sup>, Park HJ<sup>4</sup>

<sup>1</sup> College of Pharmacy, Kyungsung University, <sup>2</sup> College of Pharmacy, Kyung-Hee University, <sup>3</sup> Central Research Institute, Il-Yang Pharmaceutical Co., <sup>4</sup> Division of Applied Plant Sciences, Sangji University

GC-MS analysis on the essential oil (CC-oil) of Cinnamomum cassia stem bark led to the identification of cinnamaldehyde (CNA, 1), 2-hydroxycinnamaldehyde (2-CNA), coumarin (2) and cinnamyl acetate. The most abundant volatile flavor was found to be 2-CNA. Phytochemical isolation of the essential oil yielded the colorless oil CNA and colorless needle coumarin. CNA and CC-oil showed the potent cytotoxicities and these had the property that can be readily blocked by N-acetylcysteine (NAC) with strong nucleophilic sulfhydryl. This suggested that alpha,beta-unsaturated aldehyde of CNA or its derivatives are capable of conjugating with sulfhydryl biomolecules. Intraperitoneal administration with CNA considerably decreased glutathione S-transferase in the rat. However, the administration of CNA did not increase the malondialdehyde (MDA) value of normal rat but decreased it by less than of normal rat. This result suggested that CC-oil and CNA could regulate hepatic drug-metabolizing enzymes and contribute to the improvement of several of diseases associated with aging.

[PD2-47] [ 04/20/2001 (Fri) 13:30 – 14:30 / Hall 4 ]

### Evaluation of the herbal extract mixture for the Effects of Hair-Regrowth ; elongation of Anagen period on C3H mice

Lee KH, Han SJ<sup>o</sup>, Park MS, Lee SE, Kim GO, Lee HJ, Han KT, Kwon YE

Advanced Science Research Laboratory, STC Life Science Center

Hair follicles exhibit an intrinsic hair cycle that is divided into three phases: growth (anagen), transition (catagen), and quiescence (telogen) phase. Herbal extract mixture (STC-1) containing the extracts of *Polygoni multiflori radix*, *Mori cortex radiceis*, *Gingco biloba*, and Pine bud have been subject to investigation with specific interest in hair growth activity. Experiments carried out with C3H mice. Morphological examination of the experimental group treated by STC-1 has shown the induction of anagen phase, on 7 days after depilation, 3 days earlier than that of the control. Enzyme activities as a biochemical marker were investigated in the third hair cycle period of C3H mice after depilation. The results showed that the levels of gamma-glutamyl transpeptidase and alkaline phosphatase were increased in the experimental group treated by STC-1, which can be correlated to hair regrowth. In the experimental group, gamma-GT activity being considered as a marker of hair growth was shown 1.5 times higher than that of the control.

[PD2-48] [ 04/20/2001 (Fri) 13:30 – 14:30 / Hall 4 ]

### Pharmacognostical Studies on the Folk Medicine 'Sin Kyung Cho'

Park Jong Hee, Cho Chang Hee<sup>o</sup>, Kim Kwang Tae

College of Pharmacy, Pusan National University

Korean folk medicine 'Sin Kyung Cho' has been used to cure common cold and rheumatism. The botanical origin of the crude drug has never been studied pharmacognostically.

To clarify the botanical origin of Sin Kyung Cho, the morphological and anatomical characteristics of *Rubia* species growing in Korea, i.e. *R. akane* Nakai, *R. chinensis* Regel et Maack var. *glabrescens* (Nakai) Kitagawa, *R. cordifolia* L. var. *pratensis maxim*, *R. cordifolia* L. var. *sylvatica* Maxim. were studied.

As a result, Sin Kyung Cho was proved to be the underground portion of *Rubia akane* Nakai.

[PD2-49] [ 04/20/2001 (Fri) 13:30 – 14:30 / Hall 4 ]

### Pharmacognostical Studies on the 'Maig Moon Dong'

Park Jong Hee, Cho Chang Hee<sup>o</sup>, Kim Kwang Tae

College of Pharmacy, Pusan National University

"Maig Moon Dong (麥門冬)" is one of the Chinese crude drugs used mainly to cure a cough and sputum, etc. With regard to the botanical origin of "Maig Moon Dong", it has been considered to be *Liriope* species of Liliaceae, but there has never been studied pharmacognostically.

To clarify the botanical origin of Maig Moon Dong, we studied on the anatomical characteristics of *Liriope* and *Ophiopogon* species growing wild in Korea i.e. *L. platyphylla*, *L. spicata*, *O. jaburan*, *O. japonicus* and of Maig Moon Dong from Korea.

As a result, the botanical origin of Maig Moon Dong from Korea was proved to be *Liriope platyphylla* and *L. spicata*.

[PD2-50] [ 04/20/2001 (Fri) 13:30 – 14:30 / Hall 4 ]

### mRNA Differential Display for the Isolation of Growth-Stimulating Factors from *Hyoscyamus niger* Adventitious Roots