

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'

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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'

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"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

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Adventitious roots of *Hyoscyamus niger* L. (Hn), a rich source of pharmaceutically important tropane alkaloids, proliferate vigorously in liquid medium without auxins. In order to investigate the growth-stimulating factors of Hn adventitious roots, mRNA was purified from the roots and differential display was performed using RT-PCR.

Hn adventitious roots were cultured for 5 weeks in Murashige and Skoog liquid medium, reached stationary stage of their growth, and the medium was changed to Woody Plant (WP) liquid medium for the stimulation of growth. After culturing for 6 days in the WP medium, the roots were harvested and their mRNAs were reverse-transcribed. The cDNAs were amplified, resolved by electrophoresis, and compared with those of the control roots in stationary growth stage. The bands specific to rapid growth stage were isolated and cloned to be analyzed for their sequences. Among five clones analyzed, clone 1 and 3 displayed high homologies to cDNAs of plant retrotransposons and ribitol dehydrogenase, respectively. In addition, the differential expression of clone 3 was confirmed by Northern blot analysis.

Poster Presentations – Field D3. Oriental Medicine

[PD3-1] [04/19/2001 (Thr) 13:30 – 14:30 / Hall 4]

Studies on the Quality Control of Crude Drugs (I) – Studies on the standard for standardization of Pinelliae Tuber using the instrumental analysis

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This study was carried out for the standardization and quality control of Pinelliae Tuber. It is used as an antiemetic, antitussive and sedative agent in traditional treatment. For a standard compound, guanosine was examined for the identification and quantitation for Pinelliae Tuber. As a result, the contents of guanosine are 0.01~0.42% with 23 samples collected from different countries such as China, Korea and Japan. Total ash content of Pinelliae Tuber samples is 0.5~8.7% with 8 inappropriate samples over the standard index (less than 3.5%).

The identification method was evaluated by TLC and quantification method by HPLC for Pinelliae Tuber. The proper conditions of TLC were ; absorbent : Silicagel gel GF254, solvent : chloroform-MeOH-glacial acetic acid (15 : 7 : 1), spraying reagent : Vanillin H₂SO₄. To quantify Pinelliae Tuber, HPLC method was applied and the optimal analytical conditions of HPLC were as follows ; column : μ -Bondapak C18, detector : PDA (254nm), mobile phase : 0.5% acetic acid solution(adjusted to pH 4.2 with NH₄OH(1→2)). The availability of guanosine in water extract of Pinelliae Tuber preparations was 54.5~69.9%.

[PD3-2] [04/19/2001 (Thr) 13:30 – 14:30 / Hall 4]