

Lee HyunJin<sup>o</sup>, Jung Da-Woon, Sung ChungKi

College of Pharmacy, Channam National University, Kwangju 500-757, Korea

This study was carried out to analysis of astragalosides from the adventitious root of *in vitro* cultures of *Astragalus mongholicus*(Leguminosae). Adventitious roots of *Astragalus mongholicus* was cultured in Gamborg B5 basal medium containing 3% sucrose at 25°C in the dark at 100rpm. During culture periods from 0 to 42 days, the adventitious roots were harvested at intervals of 7 days. Astragalosides were extracted from dried adventitious roots of *Astragalus mongholicus* by reflux with 70%EtOH. After filtration, the extracts were combined and the solvent was evaporated. The residue was partitioned between *n*-BuOH and H<sub>2</sub>O. *n*-BuOH fraction was evaporated to dryness and dissolved in MeOH.

As a result, the patterns of growth curve of fresh weight mass and dry weight mass showed almost same pattern. that is, they showed the highest after 28 days, 2.47g/100ml flask and 0.27g/100ml flask of dry weight, respectively. Astragalosides from adventitious roots were identified by TLC(silica gel RP-18, MeOH:H<sub>2</sub>O=4:1) and their contents are being measured.

[PD2-7] [ 10/19/2001 (Fri) 14:00 - 17:00 / Hall D ]

### Production of Dammarane Sapogenins in Hairy Root Culture of *Panax ginseng* Following Elicitation

Jung Da-Woon<sup>o</sup>, Kim JaeOk, Li Hai Guang, Sung ChungKi

College of Pharmacy, Chonnam National University, Kwangju 500-757, Korea

in order to investigate effects of elicitation on the production of dammarane-type triterpenes, methyl jasmonate (MeJ) was added to hairy root cultures of *Panax ginseng*.

At the beginning of a culture cycle, the hairy roots were treated with MeJ and cultured in half-strength Murashige & Skoog medium at 25 °C in the dark with shaking (100 rpm). At culture day 0, 7, and 14, the roots were harvested and extracted with acetone by ultra sonication. The contents of protopanaxadiol (PPD) and protopanaxatriol (PPT) were analyzed respectively using enzyme-linked immunosorbent assays.

As a result, MeJ in the range 5 μM-125 μM strongly improved PPD production in a dose-dependent manner. Whereas the effects of MeJ on PPT production were much weaker than those on PPD production. Higher than 125 μM, MeJ decreased PPT production in *P. ginseng* hairy roots. It was also found that MeJ treatments inhibited the growth of *P. ginseng* hairy roots.

This study could be useful for the elucidation of the biosynthetic pathway of dammarane saponins and their aglycones in *P. ginseng*.

[PD2-8] [ 10/19/2001 (Fri) 14:00 - 17:00 / Hall D ]

### New Angiogenesis Inhibitors from Marine Invertebrates

Jeong SeiJoon<sup>o</sup>, Miyamoto Tomofumi, Higuchi Ryuichi

Department of Natural Products Chemistry, Graduate School of Pharmaceutical Sciences, Kyushu University, Japan

In the course of our search for signal transduction inhibitor of endothelial cells, we have investigated the anti-angiogenic activity of Japanese marine invertebrates. Among them, the EtOH extracts of the bryozoan *Dakaria subovoidea*, the sponge *Amphimedon paraviridis*, and the sponge *Chondrosia chucalla*