

[PA1-32] [10/18/2002 (Fri) 09:30 - 12:30 / Hall C]

Anti-proliferative Effects of *Ixeris sonchifolia* H. Extracts on Human Hepatocellular Carcinoma Cells

Yee Su-Bog⁰, Choi Hye Joung, Park Hwa Sun, Chung Sang-Woon, Park Sangeun, Im Kwang Sik¹,
Bae Song Ja², Hae Young Chung, Nam Deuk Kim

¹Dept. of Pharmacy, Dept. of Manufacturing Pharmacy, Pusan National University, Pusan 609-735,
²Dept. of Food and Nutrition, Silla University, Pusan 617-736

We investigated the anti-proliferative effects of *Ixeris sonchifolia* H. (godulbaegi) root extracts, luteolin (3', 4', 5, 7-Q-glucoside and 3', 4', 5, 7-tetrahydroxyflavone) and apigenin (3', 4', 5, 7-O-gluconic acid) on HepG2 (p53 wild type) cells, Hep3B (p53 null) cells, and Chang liver cells. In MTT assay 3', 4', 5, 7-tetrahydroxyflavone showed the most efficient anti-proliferative effects on these three cell lines. However, there was no significant anti-proliferative effect on Chang liver cell line in MTT results. We postulated that these effects might be a result from G₁ cell cycle arrest after propidium iodide staining, flow cytometry, analysis, and DNA fragmentation assay on HepG2 cells. We also examined the changes of protein expression levels related cell cycle arrest and apoptosis on HepG2 and Hep3B cells using Western blotting and RT PCR from 0 to 72 hours in time and 7, 12.5, and 25 µg / ml concentration of luteolin, one of the main active components. These data represented that the G₁ phase cell cycle arrest was gradually transferred from cytostatic state to apoptosis in time- and dose-dependent manner. They also suggested that time- and dose-dependent anti-proliferative effects are controlled by TGF-β1, Fas, and p53 signaling pathways.

[PA1-33] [10/18/2002 (Fri) 09:30 - 12:30 / Hall C]

GREEN TEA EXTRACT INHIBITS CATECHOLAMINE RELEASE IN THE PERFUSED RAT ADRENAL GLAND

DONG-YOON LIM⁰, HYE-GYEONG SHIN

Department of Pharmacology, College of Medicine, Chosun University, Gwangju 501-759, Korea

The present study was designed to investigate the effects of green tea extract (GTE) and epigallocatechin gallate (EGCG) on secretion of catecholamines (CA) in the isolated perfused rat adrenal gland. In the presence of GTE (100 µg/ml) into an adrenal vein for 60 min, CA secretory responses evoked by ACh (5.32 mM), high K⁺ (56 mM) and Bay-K-8644 (10 µM for 4 min) from the isolated perfused rat adrenal glands were greatly inhibited in a time-dependent fashion. However, EGCG (8 µg/ml) did not affect CA release evoked by ACh and high K⁺. GTE itself did fail to affect basal catecholamine output.

Taken together, these results demonstrate that GTE inhibits greatly CA secretion evoked by stimulation of cholinergic nicotinic receptors as well as by the direct membrane depolarization from the isolated perfused rat adrenal gland. It is felt that this inhibitory effect of GTE may be due to blocking action of the L-type dihydropyridine calcium channels in the rat adrenal medullary chromaffin cells, which is relevant to the cholinergic nicotinic blockade. It seems that there is a big difference in mode of action between GTE and EGCG.

[PA1-34] [10/18/2002 (Fri) 09:30 - 12:30 / Hall C]

The anti-inflammatory activity of *Kalopanax pictus* bark extract (V). Effects of saponins from KP on NF-κB and elastase activities