Pharmacol 63:607-616) showed that transcription factor AP-1 is important signal factor involved in PC12 cell differentiation, we further determined AP-1 and other transcription factor NF-κB activation during cell differentiation. Concomitant with cell differentiation, AP-1 and NF-κB was activated at lower dose (0.5-5 U/ml) of EPO in a dose dependent manner. In addition, in the presence of anti-EPO antibody, the effect of EPO was partial blocked. These data show that EPO induced neuronal cell differentiation, and transcriptional factor AP-1 and NF-κB may be involved in neuronal cell differentiation.

[PC3-16] [2003-10-10 09:00 - 13:00 / Grand Ballroom Pre-function]

The Effect of Anticarcinogenic Activity of Rhodiola Sachalinesis Extract

Soung-Young Park°, song-Ja Bae
Department of Food and Nutrition, Silla University

This study was performed to determine the anticarcinogenic activity of the Rhodiola Sachalinesis Extract (RS) on several microorganisms and human cancer cell lines. Among the various solvent fractions of RS, the ethylether partition layer (RSMEE) showed the strongest antimicrobial activity, ethylacetate partition layer (RSMEA) resulted in good antimicrobial activity. We also determined the effect of RS extract and fractions on cytotoxicity, and chemopreventive effect on human cancer cells. The experiment was conducted to determine cytotoxicity of RS partiton layers on HepG2, HeLa, HT-29 and MCF-7 cells by MTT assay. Among the various partition layers of RS, RSMEE were showed the strongest cytotoxic effects on all cancer cell lines. The Quinone reductase induced activities of HepG2 cell, the ethylether partition layer (RSMEE) was 3.21 times more effective compared to the control value of 1.0. This value was significantly higher than that of previous results using the other materials. Therefore, vased on these studies, RS may be developed into a potentially usful antimicrobial and anticarcinogenic agents.

[PC3-17] [2003-10-10 09:00 - 13:00 / Grand Ballroom Pre-function]

Activation of MKK6 induces invasive and migrative phenotypes in MCF10A human breast epithelial cells

Song Hyun°, Moon Aree
College of Pharmacy, Dongduk Women's University

Ras expression has been suggested as a marker for tumor aggressiveness of breast cancer, including the degrees of invasion and tumor recurrence. We previously showed that p38 MAPK is a key signaling molecule differentially regulated by H-ras and N-ras, leading to H-ras-specific cell invasive and migrative phenotypes in human breast epithelial cells (Cancer Res.: 63, 5454-5461, 2003). In this study, we further investigated the role of p38 MAPK pathway in the induction of metastatic potential in MCF10A cells as a "gain of function" study. We established stable transfectants of MCF10A expressing constitutively activated mutant of MAP kinase kinase (MKK)-6, the direct upstream activator of p38 MAPK. We show the induction of invasion and cell migration with specific upregulation of MMP-2 in these cells, demonstrating the role of p38 MAPK pathway in the metastatic potential in MCF10A cells. [Supported by a grant (R04-2003-000-10063-0) from the Basic Research Program of the Korea Science & Engineering Foundation]

[PC3-18] [2003-10-10 09:00 - 13:00 / Grand Ballroom Pre-function]

Characterization of Erythropoietin Producing Cell Lines after Introduction of Urea Cycle Enzymes, Carbamoly Phosphate Synthetase and Ornithine Transcarbamoylase

Lee YunJeong°, Kim NaYoung, Kim HyungJin, Choi JungHo, Kim JungKwon, Chang KernHee, Kim JungHoe, Kim Hong-Jin
College of Pharmacy, Chung Ang University, 221 Huksuk-Dong, Dongjak-Ku, Seoul 156-756, Korea, Samsung Fine Chemicals Co., LTD. R&D Center, Seoul, Korea, Department of Biological Sciences, KAIST 371-1, Kusong-Dong, Yusong-Gu, Daejon 305-701, Korea