induced NF-κB activation. The MEK1/2 inhibitor U0126 strongly inhibited NF-κB activation through blockade of Iκ Bα phosphorylation, while p38 inhibitor SB203580 did not much influence TPA-induced NF-κB activation in mouse skin. Taken together, suppression of TPA-induced COX-2 expression by blocking activation of ERK and NF-κB may account for molecular mechanisms by which curcumin exerts anti-tumor promoting effects on mouse skin tumorigenesis.

[PC1-31] [10/17/2002 (Thr) 13:30 ~ 16:30 / Hall C]

Proteome Analysis of Apicidin-Treated Human Cervix Cancer Cells

Shim Wonjo°, Cho Eun-jung, Lee Hoi Young, Hong Sungyoul, Han Jeung Whan, Lee Hyang Woo

Lab. Of Biochemistry & Mol. Biology, College of Pharmacy, Department of Genetic Engineering College of Life sci.& Tech., Sungkyunkwan university, College of Medicine, Konyang University

Apicidin[cyclo(N-O-methyl-L-tryptophanyl-L-isoleucinyl-D-pipecolinyl-L-2-amino-8-oxodecano y)], a histone deacetylase inhibitor, has been shown to cause growth arrest and morphological change of cancer cells, resulting from the alternation of protein expression, such as p21WAF1/Cip1 and gelsolin. However, proteome of altered by apicidin are poorly studied. In this study, we used a functional proteomics approach to identify the proteome altered by apicidin in HeLa cells at 24hr post-treatment. To identify the proteome altered by apicidin, we used two-dimensional electrophoresis and MALDI-TOF mass spectrometry; We were able to resolve more than 1000 protein spots each in both treated and untreated HeLa cells. We found here that cyclophilin I was decreased by *apicidin treatment. Cyclophilin I have been shown to process peptidyl-prolyl cis-trans isomerase activity*, which is thought to contribute to the proposed role of cyclophilin I as mediator of protein folding and as chaperones. Also Hsp27 has shown to be modified by apicidin treatment, e.g. phosphorylation or acetylation. This modification might be attributable to the morphological change by apicidin, because Hsp27 phosphorylation has been considered to be closely involved in actin-cytoskeleton rearrangement. These results suggest that apicidin may affect the function of molecular chaperones, and the elucidation of possible role of these proteins is our current subject.

[PC1-32] [10/17/2002 (Thr) 13:30 ~ 16:30 / Hall C]

Differential involovement of JNK in apicidin-induced apoptosis.

Kim Ji-Ae°, Cho Eun-Jung, Lee Hoi Young, Hong Sungyoul, Lee Hyang-Woo, Han Jeung-Whan

Lab. of Biochem. & Mol. Biol., College of Pharmacy, Department of Genetic Engineering, College of Life Sci. & Tech., Sungkyunkwan University, College of Medicine, Konyang University

We previously reported that apicidin induces apoptosis through selective induction of Fas/Fas ligand, resulting in the release of cytochrome C from mitochondria to the cytosol and subsequent activation of caspase-9 and ?. However, we observed that apicidin did not induce the apoptosis in a specific cell line, such as HeLa, which was characterized by nuclear DNA fragmentation. On the basis of these facts, we tested whether JNK activation is involved in cell death induced by apicidin. JNK signaling pathway might be required for the apicidin induction of apoptosis in Jurkat cells but not HeLa cells, because specific inhibition of JNK with SD600125 and dominant negative JNK significantly inhibited PARP cleavage in Jurkat cell, but not HeLa cell. Furthermore, we observed the difference in constantly expressed level of Hsp70, which acts as an anti-apoptotic chaperone through the inhibition of JNK activity via physical interaction, suggesting that this difference might be contributable to the decision between apoptosis and survival in response to apicidin. Therefore, we will attempt to elucidate the possible role of Hsp70 using a specific down regulation with antisense oligonucleotide against Hsp70 in HeLa cell and overexpression of Hsp70 in Jurkat cell, respectively

[PC1-33] [10/17/2002 (Thr) 13:30 ~ 16:30 / Hall C]

Apicidin Induction of cyclin E might be mediated by Sp1 Transcription Factor

Kim Soyoung°, Cho Eun-Jung, Lee Hoi Young, Hong Sungyoul, Lee Hyang-Woo, Han Jeung-Whan

Lab. of Biochem. & Mol. Biol., College of Pharmacy, Department of Genetic Engineering, College of Life Sci. &