

as 2.7Kb vector fragment. Finally, 3.3Kb HindIII DNA fragment could be obtained by deletion analysis.

[PC3-1] [10/20/2000 (Fri) 15:30 - 16:30 / [Hall B]]

Sphingosine Accumulation by FTY720 induces Apoptosis in LLC-PK1 cells

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FTY720, a synthetic sphingoid base analog, was investigated as a new potent sphingosine kinase inhibitor and increases sphingosine which induces apoptosis in LLC-PK1 cells. FTY720 showed high level of fragmented DNA, induction of caspase-3 like activity and TUNEL staining cells. We have as well found that sphingosine and sphinganine were accumulated endogenously in time- and dose-dependent manner within 12 hr by FTY720 treatment. The activity of sphingosine kinase was also reduced by FTY720 like as other sphingosine kinase inhibitors, N,N-dimethylsphingosine, dl-threo sphinganine. Fragmented DNA content by 20 μ M FTY720 and by 5 μ M of exogenously added BSA-sphingosine complex represents typical apoptosis. In the same above conditions, accumulated sphingosine concentration in total cells is almost identical though sphingosine distribution inside cells may be somewhat different. Our results indicate that FTY720 induced apoptosis is associated with inhibition of sphingosine kinase activity and is related to successive accumulation of sphingosine.

[PC3-2] [10/20/2000 (Fri) 15:30 - 16:30 / [Hall B]]

Glycolic acid attenuated UVB-induced Activator Protein-1 activation by down regulation of c-fos gene expression in HaCaT cells

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Glycolic acid is widely used as cosmetic ingredient since it is expected to reduce the wrinkles, roughness, age spots of skin and other signs of sunburn damages. In the previous our in vivo study, we investigated that glycolic acid inhibited UVB-induced mouse papilloma formation in two-stage carcinogenesis model. Modification of UVB-induced Activator Protein-1 (AP-1) activation by glycolic acid was investigated as a possible mechanism in a cultured human keratinocyte cell line, HaCaT. Glycolic acid decreased UVB-induced AP-1 activation. UVB-induced c-fos mRNA and c-Fos protein expression were also attenuated by UVB and glycolic acid co-treatment. Taken together, the ability of glycolic acid for down regulate the expression of AP-1 DNA binding protein may be involved in the attenuation of AP-1 activation. Considering the functional role of AP-1 activation in UVB-induced epidermal carcinogenesis, the attenuation of UVB-induced AP-1 activation by glycolic acid may play in part a role in the inhibitory effect of glycolic acid on UVB-induced skin carcinogenesis.

[PC3-3] [10/20/2000 (Fri) 15:30 - 16:30 / [Hall B]]

p27kip1 promotes ceramide-induced apoptosis in HL-60 cells

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