

Transforming growth factor- β (TGF- β), a hormonally active polypeptide found in normal and transformed tissues, regulates cellular growth and phenotypic plasticity. We have previously shown that H-ras, but not N-ras, induces invasive phenotype in MCF10A human breast epithelial cells. In this study, we wished to examine the effect of TGF- β on H-ras-induced invasion and motility in MCF10A cells by performing *in vitro* invasion assay and wound migration assay. TGF- β significantly induced invasive phenotype of non-invasive parental MCF10A and N-ras MCF10A cells. Since matrix metalloproteinase (MMP)-2 and MMP-9 play critical roles in cellular invasion, we investigated MMP-2 and MMP-9 activities in TGF- β -treated cells. A prominent upregulation of MMP-2 and a slight increase of MMP-9 were detected upon TGF- β treatment, suggesting that TGF- β -induced invasive phenotype may possibly be mediated by MMP-2 rather than MMP-9. TGF- β enhanced migration of H-ras MCF10A and N-ras MCF10A cells in a dose-dependent manner while it did not affect non-transformed MCF10A cell migration. The data suggest that the stimulatory effect of TGF- β on migration is seen only in cells where the ras signaling pathway is activated but not in the parental MCF10A cells. In order to study the molecular mechanisms under which TGF- β enhances cell migration, activation of ras downstream effector molecules by TGF- β is currently being investigated

[PC1-44] [10/17/2002 (Thr) 13:30 - 16:30 / Hall C]

cDNA cloning of a membrane-associated, magnesium-dependent 30kDa neutral sphingomyelinase

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A major lipid-signaling pathway in mammalian cells implicated the activation of sphingomyelinase (SMase), which hydrolyses sphingomyeline to generate ceramide and phosphocholine. Sphingomyelinase is divided into many isoform groups dependent on optimal pH, and essential cation especially magnesium in their activation. Such as acidic sphingomyelinase, neutral sphingomyelinase and alkaline sphingomyelinase.

Ceramide is known as a crucial second messenger in cell responses like cell proliferation, cell cycle arrest, cellular senescence, and apoptosis. However there are many reports that ceramide activates CAPP (ceramide-activating protein phosphatase), CAPK (ceramide-activating protein kinase) and phospholipaseA2 etc.

In this study, it was confirmed that the 30 kDa protein has the SMase activity. cDNA encoding the 30 kDa protein was cloned using anti-30 kDa protein antiserum. cDNA sequencing analysis of the DNAs showed that the 30 kDa protein is identified as a well-known protein.

For further study, the protein will be expressed in the Eukaryotic cells and the SMase activity will be measured. And the cellular fuction of this protein will be studied using 2-D electrophoresis and Maldit-of.

[PC1-45] [10/17/2002 (Thr) 13:30 - 16:30 / Hall C]

Stability of the current biological drugs(typhoid vaccine)

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This paper presents stability of tyhoid vaccine -attenuated vaccine(oral) and killed vaccine(vi polysaccharide)- 5 classes with various temperature(3 points: iced temperature, refrigeration temp., indoor temp.). Analytical techniques -vi polysaccharide content, pH, sterility, assay - have been used for the quantity of pharmacologically active chemical entries. From this study, we have found the attenuated vaccine is show iced temp. 258% and indoor temp. 0.02% compare with refrigeration temp. in assay examination and the killed vaccine is not found different.

[PC1-46] [10/17/2002 (Thr) 13:30 - 16:30 / Hall C]

An *In Vitro* Bioassay for Nerve Growth Factor

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