increased proliferation and migration of Hs683 human glioma and C6 rat glioma cells in a dose-dependent manner. Since involvement of mitogen-activated protein kinases (MAPKs) in the cellular effect of GDNF has been suggested, we investigated the activation of JNK, ERK-1,2 and p38 by GDNF treatment in Hs683 cells. GDNF prominently increased phosphorylated form of p38 without affecting total p38 level. We also show that activation of other MAPKs, JNK and ERK-1,2, was also detected upon GDNF treatment, to a lesser degree compared to p38. Stimulatory effect of GDNF on Hs683 cells was supresssed by SB203580, p38 specific inhibitor. Morerever, PD98059, ERK inhibitor, inhibits effects of GDNF. Our data suggest that the stimulus effect of GDNF on glioma cell migration may possibly be mediated by activation of MAPKs.

Poster Presentations - Field C2. Microbiology

[PC2-1] [04/18/2003 (Fri) 09:30 - 12:30 / Hall P]

A Liquid Culture Bioassay System for the Detection of Quorum Sensing Signaling AHL Analogues

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Recent studies have revealed that bacterial biofilm production by the gram-negative bacteria is regulated by the quorum sensing signaling molecules, AHLs (N-acyl homoserine lactones). This suggests that inhibiting the AHLs could enhance the effects of antibacterial agents. Halogenated furanones purified from the red algae Delisea pulchra have been known to decrease quorum sensing responses by competitive inhibition of the AHLs. In order to screen for these AHL inhibitors from marine natural products collected off Korean waters, an effective bioassay system has been developed using the AHL analogues-responsive recombinant Agrobacterium tumefaciens NTL4 (pCF218)(pCF372) strain. Compared to the previously developed plate bioassay, this novel liquid culture system was 100 times more sensitive and effective for quantitative analysis. Moreover, the lipophilicity of the AHL analogues seems to affect the response of the assay.

[PC2-2] [04/18/2003 (Fri) 09:30 - 12:30 / Hall P]

Purification and Characterization of β-Glucosidase and α-Arabinofuranosidase Metabolizing Ginsenoside Rc from *Bifidobacterium* K-103

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Ginsenoside, major components of ginseng have been reported to show various biological activities including an increase of cholesterol metabolism, stimulation of serum protein synthesis, immunomodulatory effects. To explain these pharmacological actions, it is thought that ginseng saponins should be metabolized by human intestinal bacteria after they are orally administered. Related to the biotransformation of ginsenosides, Bae *et. al.* isolated ginsenoside-metabolizing