Here, we reported MBL purified by using PG affinity column, and its biochemical characterization. MBL might be engaged in activation of complement-MBL mediate pathway.

[PC1-37] [ 04/18/2002 (Thr) 14:00 - 17:00 / Hall E ]

## Studies on Inhibitory Effect of Melanoma Cell Invasion by Human Placenta Histone H1

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Histone H1 was purified from human placenta and the inhibitory effect on the invasion of melanoma cell was studied. The histone subraction H1.5 was purified from acid-extract of human placenta. It did not affect the melanoma cell proliferation, and slightly increase the cell motility on gelatin coated membrane. It was detected that histone H1 inhibited the invasion of melanoma cell on Matrigel coated membrane in dose-dependent manner. But, the inhibitory effect of histone H1 on the invasion of melanoma cells were not related to the early expression of MMP gene. These results suggest that the inhibitory action of histone H1 on the invasion of melanoma cells and will provide the possibility of development on anti-invasive agents.

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## *Purification of Paraoxonase 1 from Human Plasma*

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Human paraoxonase 1 (PON1), an enzyme associated with high density lipoprotein, is responsible for the hydrolysis of organophosphates as well as aryl esters. Especially, the enzyme possesses the ability to protect low density lipoprotein against $Cu^{+2}$ catalyzed oxidation. Here, PON1 is purified from human plasma by using Cibacron Blue 3GA chromatography, DEAE sephacell chromatography, Sephacryl HR-200 chromatoghraphy and Concannavalin A chromatography. Finally, FP-HPLC is utilized to remove other contaminating proteins. The purified paraoxonase, showing a specific activity of 585 μmole /min/mg protein (195 fold) was relatively pure on SDS-PAGE analysis. The enzyme, expressing a Km value of 0.87 mmole, was inactivated irreversibly by p-hydroxymercury benzoic acid and acrolein, indicating that cystein residue exist in the active site. In the addition, the susceptibility of PON1 to $Cu^{+2}$ bound 'OH may support the involvement of histidine residue in active site. Based on the results, human plasma is identical to that from human serum in various physicochemical properties.

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## The novel peptidoglycan detection system by using prophenoloxidase cascade reaction

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The prophenoloxidase(proPO)-activating system(proPO-AS) is an efficient non-self recognition system in invertebrates that can recognize and respond to micrograms of lipopolysaccharides(LPS) or peptidoglycans (PG) from bacteria and B-1,3-glucans from fungi.
To obtain the solution showing specific phenoloxidase(PO) activity against PG, I have prepared PG-specific solution from Galleria mellonella larvae by using the first and the second Sephadex G-100 gel filtration