show various biological activities including antiinflammatory activity and antitumor effect. In addition, Sugiyama et al. reported that ginsenoside Rg3 suppresses histamine release from mast cells due to stimulation with compound 48/80 in vitro. However, the antiallergic effects of ginsenoside Rh2, which is metabolized by human intestinal bacteria to ginsenoside Rg3, have not been studied. We therefore isolated ginsenoside Rg3 from red ginseng, transformed it to ginsenoside Rh2 by human intestinal bacteria, isolated ginsenoside Rh2 and measured antiallergic activities. In result, ginsenoside Rh2 had the most potent inhibitory activity on β-hexosaminidase release from RBL-2H3 cells and in the passive cutaneous anaphylaxis reaction. This compound also showed membrane stabilizing action upon differential scanning calorimetry and inhibitied nitric oxide and prostaglandin $E_2$ in lipopolysaccharide-stimulated RAW cells. However, this ginsenoside Rh2 did not inhibit the activation of hyaluronidase and scavenge active oxygen.

**[PC2-7] [ 2003-10-10 09:00 - 13:00 / Grand Ballroom Pre-function ]**

## Validation and optimization of the in vitro LAL test for detection of endotoxin in hepatitis B vaccines

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Endotoxin has been detected by the Limulus amoebocyte lysate (LAL) test. However, aluminum hydroxide used as an adjuvant and adsorbent for the recombinant protein antigen is known to increase efficacy of lipopolysaccharide vaccine in vivo thus interfering endotoxin test. The aim of this study is to determine effect of aluminum hydroxide on the LAL test using the hepatitis B vaccine as a model and to optimize the LAL test condition not to be interfered by aluminum hydroxide. When currently used 3 methods (gel clotting, chromogenic kinetic and turbidometric kinetic methods) were compared to detect endotoxin, gel clotting method was the most appropriate method not to be interfered by aluminum hydroxide although the sensitivity was much higher in the kinetic methods. To remove the interference by aluminum hydroxide, filtration and dilution method was tested. The results revealed that endotoxin was bound to 0.2 um filter and only small amount was retrieved in the filtrate. But endotoxin could be detected by gel clotting method after serial dilution of the samples thus dilution method could provide more reliability in less time for endotoxin detection. * This work was supported by the Korea Food and Drug Administration Grant (KFDA-03092-LIF-015-2).

**[PC2-8] [ 2003-10-10 09:00 - 13:00 / Grand Ballroom Pre-function ]**

## Role of Spc105p in the maintenance of genome stability

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Microtubule-organizing center (MOTC) plays pivotal roles in cell division process. Integrity of the spindle pole body (SPB) in Saccharomyces cerevisiae is required for migration and separation of sister chromatids in mitotic phase. Role of an essential SPB component, Spc105, is poorly understood. Here we show that throughout all stage of cell division cycle, GFP-tagged Spc105p localizes at SPB and its protein stability is fluctuated with mitosis-specific modifications. To gain new insights into the function of Spc105, we generated and characterized novel temperature sensitive spc105 mutants. The spc105-5 mutant exhibited chromosome missegregation and hypersensitivity to a microtubule-depolymerizing agent benomyl. Consistent with this the ts mutant has a fragmented or polyploid chromosomal structure at the nonpermissive temperature.To understand more about the SPC105 function, we tried to find out SPC105-interacting proteins using two-hybrid analysis. With LexA-DNA binding domain fusion as a bait, we isolated several candidates including a component of SUMO modification system. The putative binding protein NfiI strongly interacted with a truncated version of Spc105 homologous to myosin heavy chain. Thus, it appears to be that Spc105p complex including its binding partner harmonizes the proper segregation of sister chromatids with structural integrity of SPB.

**[PC2-9] [ 2003-10-10 09:00 - 13:00 / Grand Ballroom Pre-function ]**