GS2-2 **Protective effect of cobalt on hepatotoxicity in mice**

◯Kanako NAKASHIMA[1], Miyuki FUCHIUE[1], Hitomi FUJISHIRO[1], Seiichiro HIMENO[1]

[1]Lab. Molecular Nutrition & Toxicology, Fac. Pharm., Sci., Tokushima Bunri Univ.

Co-administration of cobalt chloride ($CoCl_2$) suppressed hepatotoxicity induced by $CdCl_2$ administration in a concentration-dependent manner in mice. $CoCl_2$ also suppressed hepatotoxicity induced by lipopolysaccharide, concanavalinA, and acetaminophen. To elucidate the mechanism of protective effects of $CoCl_2$ against hepatotoxicity, we determined the expression of interleukin-6 (IL-6), serum amyloid A (SAA), heme oxygenase-1 (HO-1), and glutathione (GSH) levels in the liver. Administration of $CoCl_2$ resulted in changes of these factors, but the protection by $CoCl_2$ against the hepatotoxicity induced by the four types of hepatotoxicants could not be explained by a single factor, suggesting the involvement of multiple factors in $CoCl_2$-induced protection. The production of serum amyloid A (SAA), which is an acute-phase protein induced by $CdCl_2$ administration, was dramatically reduced by co-administration of $CoCl_2$. On the other hand, $CoCl_2$ administration enhanced expression of IL-6, which induces expression of SAA, in the liver. These data suggest that the suppression of signal transduction pathway leading to the expression of SAA gene after stimulation with IL-6 may be involved in the protective action of $CoCl_2$.