Cadmium induces apoptosis in human lung fibroblast by inducing oxidative stress: A role of Bax and Bcl-2

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Cadmium (Cd) is an inorganic toxicant of great environmental and occupational concern which was classified as a human carcinogen in 1993. Occupational cadmium exposure is associated with lung cancer in human. In the present study, we established the mechanistic basis of apoptotic cell death induced by Cd in WI38 human lung fibroblast. Cd at 20 – 80 μM decreased viability of cells in a concentration-dependent manner. PI staining, TUNEL staining and DNA fragmentation analysis demonstrated the apoptotic cell death by Cd. Data show that Cd-induced apoptosis involves: (a) production of reactive oxygen species; (b) cleavage of Bax and translocation of truncated Bax from the cytosol to the mitochondria and cytochrome c release from the mitochondria to the cytosol; (c) increased permeabilization of mitochondrial membranes as determined by confocal and FACS analysis of loss of a mitochondrial selective fluorescent dye; (d) processing of caspase-8, -9 and –3 and cleavage of PARP as determined by Western blot analysis. Pretreatment of antioxidant inhibited apoptotic death of WI38 cells and some molecular event induced by Cd. These data suggest that reactive oxygen species is an important intermediate and Bax/Bcl-2 play central role in Cd-induced apoptotic cell death.

[PA3-11] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

Development of hangover settlement from natural products

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Hangover is associated with alcohol metabolism in body after the ingestion of an alcoholic beverage. It has been known that hangover is caused by increasing blood acetaldehyde concentration. This study was carried out to evaluate effect against blood ethanol(EtOH) and acetaldehyde(AcH) on the seven natural products samples(Lotus seed, Sweet chest nut rose, Kohki, Gurume-K, Gurume-J, Phytic acid and Chlorophyll). Also, samples which were selected as good products were mixed. Then, effect against blood EtOH and AcH formulas were tested in vivo. The Sweet chest nut rose, Kohki, Gurume-K, Gurume-J and Lotus seed were significantly ($p>0.05$)decreased blood EtOH and AcH concentration. Phytic acid and chlorophyll were not producing the effects desired.Based on these results, six formulas were significantly($p<0.05$)decreased lower than control. The formula 6 (consist of Grurume –J 10%, Sweet chest nut rose 0.2667%, Lotus seed 0.0667%, Kohki 0.0667%, respectively) was the best effects on the decreasing blood EtOH and AcH concentration.

[PA3-12] [2003-10-11 09:00 - 12:30 / Grand Ballroom Pre-function]

The Change of the Components and Forms of the Counterfeit 100mg VIAGRA™ Tablets

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VIAGRATM, an oral therapeutic agent for erectile dysfunction, is the citrate salt of sildenafil. VIAGRATM is formulated as blue, film-coated rounded-dia-mond-shaped tablets, equivalent to 25mg, 50mg and 100mg of sildenafil for oral administration.ViagraTM has been allowed to be sold at the drug store in Korea officially, but it is still increased to sell or use counterfeits or smuggled goods, because of its high price or strict restriction on both sale and purchase.Discrimination and analysis of 13 cases of VIAGRATM tablets for verification of genuineness