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A adenovirus-mediated $p16^{INK4a}$(Ad5CMV-p16) tumor suppressor gene transfer to the non-small cell lung cancer cells resulted in significant inhibition of cancer cell growth (Anticancer Res., 1998, 18:3257-3261). For the safety evaluation of adenovirus-mediated gene transfer, we investigated gene expression after transduction of Ad5CMV-p16 gene in the p16 null A549, H460 non-small cell lung cancer cells. We compared the differential gene expressions in Ad5CMV-p16-treated cells with control cells by using the cDNA chip which carries 2400 genes related with signal transduction, cell cycle, and oncogenes. To detect any unexpected protein overexpression by transfection of Ad5CMV-p16 to the target cells, we also conducted 2D-electrophoresis. In this study, we found that several genes were up or down regulated by 2 fold or more. These results suggested that we have to consider the potential effects of the other gene expressions besides therapeutic gene on the host cells as a safety concerns.

[PA4-18] [04/20/2001 (Fri) 10:30 - 11:30 / Hall 4]

Monitoring Studies on Endocrine Disruptors(Cd, Pb, Hg) in Humans

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There has been a long-standing concern in the estimation of human exposure to endocrine disruptors particulary heavy metals like as Cd, Pb and Hg. If the placenta of pregnant woman can't work to block endocrine disruptors like as heavy metals, they can be transfered to the fetus and newborn baby. So it is very important to quantify the degree of exposure in biological samples of pregnant women.
This research was intended to study the monitoring of heavy metals(Cd, Pb, Hg) as endocrine disruptors in Korean pregnant women's biological samples like as blood, cord blood, placenta and colostrum.
This showed that the concentration of Cd is 1.26±0.59㎍/L, that of Pb is 33.56±14.58㎍/L, that of Hg is 6.05±18.14㎍/L in blood, the concentration of Cd is 0.38±0.32㎍/L, that of Pb is 25.73±15.40㎍/L, that of Hg is 3.95±2.24㎍/L in cord blood, the concentration of Cd is 73.85±63.35㎍/L, that of Pb is 22.01±9.95㎍/L, that of Hg is 31.62±20.20㎍/L in dried placenta, the concentration of Cd is 1.52± 2.13㎍/L, that of Pb is 7.65±15.49㎍/L, that of Hg is 21.09±13.80㎍/L in colostrum.

[PA4-19] [04/20/2001 (Fri) 10:30 - 11:30 / Hall 4]

Bispenol A-induced alternation of peritoneal macrophage activation in mice

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Bisphenol A(BPA), endocrine disruptor, is monomer used in manufacturing epoxy resins or polycarbonates, and can be occupationally or environmentally exposed to human. To investigate of immunomodulating effect on macrophage activation, female ICR mice were administered to BPA(p.o., 100mg/kg/day or 1000mg/kg/day for 30 days). Nitric oxide(NO) production was increased to 60.2% and tumor necrosis factor(TNF)-α production was decreased to 25.8% of control in LPS-stimulated