macrophages obtained from mice exposed to BPA at high dose. Expression intensities of B7-1 and B7-2 on macrophages obtained from mice exposed to BPA at high dose were decreased. In LPS-stimulated macrophages obtained from BPA-untreated mice, NO and TNF-α production were dose-dependently decreased to 53.1% and 23.3% of control with 100μM BPA in vitro, respectively. These results demonstrate that BPA may be related to macrophage activation.

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

STUDY OF BISPHENOL A EFECTS ON THE MONKEY DRUG METABOLISNG ENZYMES VIA RT-PCR

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In order to understand the mechnism of the regulation of drug metabolizing enzyme gene expression, we have studied the induction of CYP and GST enzymes in monkey that is treated with Bisphenol A, 3-methylcholanthrene (3MC) and dibutylphthalate(DBP). The mRNA levels were measured by RT-PCR and enzymatic activity was measured via EROD. in brain, liver, and intestine by RT-PCR. In the case of adult monkey, the 3MC treatment induced CYP 1A1 mRNA in brain by 3.5-fold, and CYP 1A1 mRNA in intestine by 2.5-fold, CYP 1A1 mRNA in the liver by 7-fold respectively. And mRNA levels of GST α, μ, π were also induced by 1.5-fold, 2.3-fold, 3-fold respectively. In the case of fetus monkey, the basal levels of fetus CYP 1A1 mRNA and GSTs mRNAs were very low in comparion to adult monkey and as the age of monkey increased, the basal levels of CYP 1A1 mRNA and GSTs mRNAs were also increased. Bisphenol A and DBP treatment showed minimal induction of CYP1A1 mRNA in brain and liver and also induced GST mRNA by 1.5- to 2.5-fold in brain and intestine. [This study was supported from the HMP-98-B-3-0015]

[PA4-21] [04/20/2001 (Fri) 10:30 - 11:30 / Hall 4]

Telomerase activity is up-regulated with imperfect palindromic estrogen-response element (ERE) in human telomerase reverse transcriptase subunit (hTERT) promoter by the treatment with endosulfan

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Endosulan is a member of the organochlorine class of pesticides. Endocrine disruptors in the environment such as endosulfan may be adversely affecting the health of human and wildlife. We examined the effects of endosulfan on telomerase activity. Telomerase activity in estrogen receptor-positive MCF-7 cells was up-regulated by the treatment with endosulfan. This activation accompanied up-regulation of the telomerase catalytic subunit, hTERT mRNA. Transient expression assays using CAT reporter plasmids containing various fragments of hTERT promoter showed that this imperfect palindromic estrogen-responsive element is responsible for transcriptional activation by ligand-activated ER. These findings may help elucidate the mechanisms of endocrine disruptors.

[PA4-22] [04/20/2001 (Fri) 10:30 - 11:30 / Hall 4]

In vitro approach to investigating the free radical generation of endocrine disruptor