

[P-30]**Modulation of human cytochrome P450 1B1 by 2,3',4,5'-tetramethoxystilbene(TMS) in mammary tumor cells and its application for cancer chemotherapy.**

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We have previously shown that 2,3',4,5'-tetramethoxystilbene(TMS), a *trans*-stilbene analogue, is one of the most potently selective inhibitor of recombinant human cytochrome P450 1B1 *in vitro*. In the present studies, the effects of TMS on the expression of cytochrome P450 1B1 were investigated in human mammary cell lines such as MCF-7 and MCF-10A. TCDD-stimulated P450 1B1 expression was significantly suppressed by TMS in a dose-dependent manner. However, TMS exert no appreciable effect on Ah receptor and ARNT mRNA expression. It was found that there exists a correlation between P450 1B1 suppression and the cytotoxicity of TMS in human mammary cells. In MCF-7 cells, the cytotoxic effect of anticancer drugs such as paclitaxel, docetaxel or etoposide was enhanced in the presence of TMS. Taken together, our results indicate that TMS is a strong modulator of P450 1B1 gene expression as well as a potently selective inhibitor of P450 1B1. The ability of TMS to increase cytotoxic effect of anticancer drugs may contribute to its usefulness for cancer chemotherapy.