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**GENE EXPRESSION PROFILE OF HUMAN MAMMARY
EPITHELIAL CELLS IN RESPONSE TO
2,3,7,8-TETRACHLORODIBENZO-p-DIOXIN**

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2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) is a prototype and the most potent chemical of the polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans (dioxins). A variety of studies on the toxic effects of dioxin and related compounds have been conducted internationally since 1990. Various adverse effects such as endometriosis, developmental neurobehavioral (cognitive) effects, developmental reproductive (reduction of sperm number, female urogenital malformations) effects and immunotoxic effects, have been reported in animal studies following exposure to TCDD.

We have successfully isolated normal human breast stem cells from reduction mammoplasty and established human breast immortalized cell lines, namely M13SV1. Even if 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) was known as a potent tumor promoter in several experimental animal species, the tumorigenic effect and mechanism in human breast has not been clearly understood. Using M13SV1, Simian virus 40-immortalized cells line from normal human breast epithelial cells with stem cells and luminal characteristics, the present study showed gene expression profiles of human mammary epithelial cells in response to various concentration of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin by using cDNA microarrays containing approximately 7,448 human transcripts

Keyword : TCDD, cDNA microarray, mammary epithelial cell