

## **P18 Nitric Oxide and Hypoxia Affect TCDD Induced EROD Activity**

**Yeo W. Kim, Cha Y. Baek, Hong K. Min\* and Yhun. Y. Sheen.**

**\*Bacterials products Division, KFDA, College of pharmacy,  
Ewha womans university #11-1, Daehyundong, Seoul, 120-750**

Effects of nitric oxide and hypoxia on ethoxyresorufin deethylase in Hepa I cells and MCF-7 human breast cancer cells were examined. TCDD treatment have resulted in the stimulation of ethoxyresorufin deethylase activity based on fluorometry in Hepa I in dose and time dependent manner. 0.1 nM TCDD showed maximal stimulation of ethoxyresorufin deethylase activity and 24 hour treatment also showed maximal stimulation of ethoxyresorufin deethylase activity. In MCF-7 human breast cancer cells, untreated cells showed high basal level of ethoxyresorufin deethylase activity. TCDD treatment to MCF-7 cells resulted minor stimulation of ethoxyresorufin deethylase activity compared to that in Hepa I cells. Nitric oxide and hypoxia inhibit TCDD effects on ethoxyresorufin deethylase activity in both cell lines. And also flavonoids, such as quercetin showed an inhibition of ethoxyresorufin deethylase activity that is stimulated with TCDD or 3-Methylcholanthrene. Estrogen and estrogen metabolite such as 16  $\alpha$ -estriol and 2-hydroxyestradiol also affects the ethoxyresorufin deethylase activity in MCF-7 cells.