

**[P-61]**

## **Cytotoxic Effect of Ar-Turmerone on Various Cancer Cell Lines**

Mingjie Ji, Myoungae Kim, Heejin Yim, Duckjae Cho, and Yongkyu Lee

*Department of Food and Biotechnology, Dongseo University, San 69-1, Jurae 2 Dong,  
Sasang-Gu, Busan, Korea 617-716*

The Chinese traditional medicine *Curcuma zedoaria* (Zingiberaceae) has been proven to have a potent anti-inflammatory, antioxidant, and anticarcinogenic effects. A sesquiterpene, ar-turmerone, is isolated from *Curcuma zedoaria*. We have investigated the cytotoxic effect of ar-turmerone on K562, L1210, Jurkat, U937, Siha, RBL, and SNU cell lines by MTT assay. It exhibited potent cytotoxicity on these cancer cell lines (K562 IC<sub>50</sub> = 38.45ug/ml, L1210 IC<sub>50</sub> = 24.93ug/ml, Jurkat IC<sub>50</sub> = 21.65ug/ml, U937 IC<sub>50</sub> = 24.75ug/ml, Siha IC<sub>50</sub> = 61.13ug/ml, RBL IC<sub>50</sub> = 50.43ug/ml, SNU IC<sub>50</sub> = 42.38ug/ml). They showed increased inhibition ratio of cell viability according to the drug concentration bellow 100ug/ml in most cell lines. The fragmentations of DNA by ar-turmerone that is a characteristic of apoptosis were concentration- and time- dependent in these various cancer cell lines.

**Keyword** : ar-turmerone, cytotoxicity, apoptosis