

## Decursin Contents and Free Radical Scavenging Activities of Korean Cham-Dang-Gui (*Angelica Gigantis Radix*) Extracts Prepared with Different Methods

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### Abstract

Decursin contents and physiological activities of Korean Cham-Dang-Gui extracts obtained by extracting with water, 70% ethanol, and 100% methanol were investigated. This study was carried out to evaluate the free radical scavenging effect and antioxidant effect of Cham-Dang-Gui (*Angelica Gigas*) on cyclophosphamide (CYP) injected rat. Rats were divided into five groups: CON (normal group), ANS (CYP-injected and normal diet group), AND (CYP-injected and normal diet and Cham-Dang-Gui-treated group), ALS (CYP-injected and low iron diet group), and ALD (CYP-injected and low iron diet and Cham-Dang-Gui -treated group). CYP (30mg/kg) was intra-peritoneally injected to rats for early 3 days. Saline or Cham-Dang-Gui was administrated orally for entire experimental period. DPPH radical scavenger activity was measured by DPPH method, it was shown higher 81.5% in methanol extract than 66.3 % in water extract of Cham-Dang-Gui. We observed the preventive effect on lipid and protein oxidation, especially lipid oxidation of liver and protein oxidation of plasma were significantly inhibited in Cham-Dang-Gui treated group. Hepatic SOD and catalase activities were significantly higher in CYP-injected group (ANS) than CON group, but SOD ac-

tivity was slightly lowered in Cham-Dang-Gui treated group than CYP-injected group(ANS) group. These results suggest that water extract of Cham-Dang-Gui could be useful for functional materials to reduce the oxidation of lipids and protein induced by free radicals.

#### Reference

1. U. B. DAS, M. MALLICK, J. M. DEBNATH, & D. GHOSH. (2002) Protective effect of ascorbic acid on cyclophosphamide-induced testicular gametogenic and androgenic disorders in male rats. Asian J Androl 4,201-207.