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## Effects of Silkworm (*Bombyx mori* L.) Powder on Oxygen Radicals and Their Scavenger Enzymes in Liver of SD Rats

Soo-Hyun Park\*, Dae-Ik Kim, Jeung-Min Kim, Jin-Ho Choi, Weon-Ki Cho<sup>1</sup>, Heui-Sam Lee<sup>2</sup> and kang Sun Ryu<sup>2</sup>

Lab. of Biochemistry, Faculty of Food Science and Biotechnology, Pukyong National University; <sup>1</sup>Choa Pharmacy Co. Ltd.; <sup>2</sup>Dept. of Sericulture & Entomology, National Institute of Agricultural Science & Technology, RDA, Suwon 441-100, Korea

This study was designed to investigate the effects of silkworm (*Bombyx mori* L.) powder (SWP) on oxygen radicals and their scavenger enzymes in liver membranes of rats. Sprague-Dawley (SD) male rats (160±10g) were fed basic diet (control group), and experimental diets (SWP-200 and SWP-400 groups) added 200 and 400 mg/kg BW/day for 6 weeks. Hydroxyl radical ( $\cdot\text{OH}$ ) levels resulted in a slight decreases (4.0% and 7.2%, 5.0% and 14.1%, respectively) in liver mitochondria and microsomes of SWP-200 and SWP-400 groups compared with control group, and  $\text{O}_2^{\cdot-}$  radical level was significantly decreased about 12% in liver cytosol of SWP-400 group compared with control group. Lipid peroxide (LPO) levels were significantly decreased (14.4% and 9.1%, respectively) in liver mitochondria and microsomes of SWP-400 group only compared with control group. Oxidized protein (OP) levels were remarkably decreased about 12.7% and 16.3% in liver microsomes only of SWP-200 and SWP-400 groups, but significant difference between liver mitochondria could not be obtained. Mn-SOD activities were remarkably increased (15.8% and 25.2%, respectively) in mitochondria of SWP-200 and SWP-400 groups, but significant difference between Cu,Zn-SOD activities in these groups could not be obtained. GSHPx activity was significantly increased in liver cytosol of SWP-400 group compared with control group. These results suggest that anti-aging effect of silkworm powder may play an effective anti-aging role in attenuating oxidative stress and increasing scavenger enzyme activity in liver membranes.