LDL-antioxidant Activities of 3,8-dehydroxyquinoline and 2,4-di-*tert*-butyl-phenol from the *Scolopendra subspinipes*

Mi-Ae Yoon[1,3], Ming-Zhe Xu[1], Doo-Sang Park[1], Kyoung-Bin Song[3], Gil-Hwan An[3], Woo-Song Lee[2], Tae-Sook Jeong[2] and Ho-Yong Park[1]

[1]Insect Resources Laboratory,

[2]National Research Laboratory of Lipid Metabolism & Atherosclerosis, KRIBB,

[3]Department of Food Science & Technology, Chungnam National University

Oxidized low density lipoprotein (ox-LDL) play a critical role in atherosclerosis has been steadily accumulating. In the course of screening program for low-density lipoprotein (LDL)-antioxidant from insect resources, 3,8-dehydroxyquinoline (**1**) and 2,4-di-*tert*-butyl- phenol (**2**) as inhibitor of LDL-oxidation from the solvent extracts of the centipede, *S. subepinipes.* The NMR spectroscopic analyses showed the molecular formula of compounds were $C_9H_7NO_2$ for 1 and $C_{14}H_{22}O$ for 2, respectively. EI-Mass spectrometry gave molecular mass 161 and 206. Compounds **1** and **2** exhibited LDL-antioxidant activity in the thiobarbituric acid-reactive substances (TBARS) assay (**1**: IC_{50} = 2.6 μM, **2**: IC_{50} = 8.2 μM), the relative electrophortic mobility (REM) of ox-LDL, the apoB-100 fragmentation on copper-mediated LDL oxidation, radical DPPH scavenging activity, metal chelation activity.

Key words: *Scolopendra subspinipes,* Atherosclerosis, LDL-oxidation inhibitor