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PROTECTIVE EFFECTS OF ELLAGIC ACID AND INNER SHELL OF CHESTNUT ON HYDROGEN PEROXIDE-INDUCED OXIDATIVE DNA DAMAGE

Seung Chul Lee, He Eun Yang, Byoung Ki Jo¹, Hyun Pyo Kim, and Moon Young Heo

College of Pharmacy, Kangwon National University, Chunchon 200-701, Korea ¹Coreana

Cosmetic Co., Ltd., Cheonan, 330-830, Korea

E-mail: myheo@kangwon.ac.kr Fax: 033-253-9647

Inner shell of chestnut (*Castanea Mollissima*, *Fagaceae*) is well-known anti-wrinkle agent, which has been used for long time in the treatment of skin aging. In this study, the extract of chestnut inner shell (CMIE) and its major component, ellagic acid (EA), were studied for their protective effects against free radical generation and hydrogen peroxide-induced oxidative DNA damages in the mammalian cells. CMIE and EA was shown significant free radical scavenging effect to DPPH radical generation. They were found to inhibit hydrogen peroxide induced DNA damage assessed by the single cell gel electrophoresis assay. They also inhibited hydrogen peroxide induced 8OH2'dG formation in the CHL cells. Although its mode of action is not clarified, the inhibition of CMIE against hydrogen peroxide-induced DNA damage may be partly due to the free radical scavenging properties of EA. Therefore, CMIE may be useful chemopreventive agents by protecting of oxidative DNA damage.