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Antioxidative Activity of Crude Catechin Extracted from Human Low Density Lipoprotein(LDL) Oxidation

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The aims of this study was investigated to antioxidative activity of extracted crude catechin from Rooibos tea against low density lipoprotein(LDL) oxidation. Rooibos tea is a valuable health protecting food from the viewpoint of preventive medicine. Rooibos tea was prepared by extracting 12g of Rooibos tea leaves twice with 500mL of hot water. Rooibos tea extracts contained 4.8mg. The poly -phenol of 1.25% Rooibos tea was composed the epicatechin gallate epigall -ocatechin gallate, catechin. The crude catechin inhibited the copper-mediated oxidation of human LDL at the concentrations of 50 and 100 μ g/mL in the presence of 5 μ M CuSO₄. The crude catechin also inhibited LDL oxidation induced by macrophage J774 cell. LDL oxidized by copper mediated and cell induced oxidation was degraded by macrophage at a much greater rate than native LDL. The electrophoretic mobility of oxidized LDL by addition of crude catechin was faster than that of native LDL. The results provided a possibility that crude catechin of Rooibos tea might protect LDL against oxidation in atherosclerotic lesions.