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PROTECTION OF DNA BY *SCUTELLARIA BAICALENSIS* IN HL-60 CELLS EXPOSED TO γ -RAYS; ANALYSED BY MICRONUCLEI FORMATION AND SINGLE CELL GELL ELECTROPHORESISHeon Oh, Hae-Ran Park, Yeon-Ho Ham, Sung-Ho Kim¹, and Sung-Kee JoRadiation Food Science & Biotechnology Team, Korea Atomic Energy Research Institute;
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In the present study, the protective effect of *Scutellaria baicalensis* against DNA damage in HL-60 cells exposed to ⁶⁰Co γ -rays was evaluated using micronuclei formation and alkaline single cell gel electrophoresis (SCGE, comet assay). The frequency of micronuclei was decreased in groups treated with water extract ($P < 0.01$), polysaccharide fraction ($P < 0.01$) and methanol fraction ($P < 0.01$) before/after exposure to 200 cGy of γ -rays. In alkaline single cell gel electrophoresis, the tail movements were decreased in groups treated with water extract ($P < 0.01$), polysaccharide fraction ($P < 0.01$) and methanol fraction ($P < 0.01$) before exposure to 100, 200 and 400 cGy of γ -rays. The methanol fraction was more effective than other fractions in each experiment. These results indicated that *Scutellaria baicalensis* protect DNA damage induced by γ -rays and the methanol fraction might have a major radioprotective effect. Therefore, *Scutellaria baicalensis* might be a useful radioprotector, especially since it is a relatively nontoxic product.