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P21. DOES PUERARIN HAVE GENOTOXIC PROPERTIES on MAMMALIAN CELL LINES?

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It is well known that free oxygen radicals play important role in the pathogenesis of chronic disorders such as cancer, diabetes, cardiovascular and neurological diseases. Recent interest in plant phenolics has increased because of their protective effects against free oxygen radicals. Puerarin [7-hydroxy-3-(4-hydroxyphenyl)-1-benzopyran-4-one 8-(β-D-glucopyranozid)], isoflavone glycoside, primarily derived from Ge-gen (Pueraria lobata, Radix Puerariae). This medicinal plant is commonly used in Chinese folk medicine. Pueraria lobata has been used against alcohol dependency, hypertension, fever, headache, diarrhea and eye disorders. Phytoestrogenic activity of puerarin due to its isoflavone structure is very important in woman diseases. In the present study genotoxic/antigenotoxic effects of puerarin were evaluated by alkaline Comet assay in human peripheral blood lymphocytes and Chinese hamster lung fibroblast cells (V79). Cells were treated with 1, 5, 10, 25 and 50 µM puerarin, hydrogen peroxide (H_2O_2) was used as the positive control. According to the study, puerarin did not cause DNA damage. DNA damage was significantly lower in the puerarin + H_2O_2 treated group when compared to positive control. It seems that puerarin might have a role in the prevention of DNA damage.

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