

P22. EVALUATION OF GENOTOXIC AND ANTIGENOTOXIC EFFECTS OF PUERARIN BY MICRONUCLEUS ASSAY ON MAMMALIAN CELL LINES

Hatice Gül ANLAR, Merve BACANLI, A. Ahmet BAŞARAN, Nurşen BAŞARAN

Hacettepe University Faculty of Pharmacy Department of Pharmaceutical Toxicology 06100 Ankara, Turkey
Çukurova University Faculty of Pharmacy Department of Pharmaceutical Toxicology 06330 Adana, Turkey
Hacettepe University Faculty of Pharmacy Department of Pharmacognosy 06100 Ankara, Turkey

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-glucopyranosid)], 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 assessed by micronucleus (MN) assay in human peripheral blood lymphocytes and Chinese hamster lung fibroblast cell line (V79). In MN assay, the cells were treated with 1, 5, 10, 25 and 50 μ M concentrations of puerarin. Hydrogen peroxide (H₂O₂), 50 μ M, was used as positive control and 1% DMSO was used as negative control. In our study, the cells were treated with different concentrations of puerarin caused no genotoxic effects alone at all studied concentrations as compared with the negative control. MN frequencies of puerarin treated cells were found to be decreased when compared to positive control. It seems that puerarin might have a role in the prevention of genotoxic damage.

* haticegulgoktas@gmail.com