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Interactive 360° video

Interactive 360° video to "Polyphenolic extracts of walnut (*Juglans regia*) green husk containing juglone inhibit the growth of HL-60 cells and induce apoptosis"

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ABSTRACT

Background: Juglone is a naphthoquinone currently obtained by chemical synthesis with biological activities including antitumor activity. Additionally, juglone is present in the green husk of walnut, which suggests evaluating the effect of GH extracts on carcinogenic cell lines.
Results: Walnut green husk ethanolic extract was obtained as 169.1 mg juglone/100 g Green Husk and antioxidant activity (ORAC) of 44,920 μmol Trolox Equivalent/100 g DW Green Husk. At 1 μM juglone in HL-60 cell culture, green husk extract showed an antiproliferative effect, but pure juglone did not; under these conditions, normal fibroblast cells were not affected. A dose-dependent effect on mitochondrial membrane potential loss was observed. Apoptosis of HL-60 was detected at 10 μM juglone. Despite high ORAC values, neither purified juglone nor the extract showed protective effects on HL-60 cells under oxidative conditions.
Conclusions: Green husk extract generates an antiproliferative effect in HL-60 cells, which is related to an induction of the early stages of apoptosis and a loss of mitochondrial membrane potential. The normal cells were not affected when juglone is present at concentrations of 1 μM, while at higher concentrations, there is loss of viability of both cancerous and healthy cells.
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Interactive 360° video

To view this interactive 360 degree video supplementary to the materials and methods section, please visit this URL http://ejbiotechnology.info/public/360view/2022/VTPCREAS_2V7/INDEX.HTML.

To view correctly, it is necessary to scroll through the screen to navigate across the laboratory where you will find 6 interactive points. For an immersive experience a head-mounted display can be used.