

P19. IN VITRO CYTOTOXICITY AND APOPTOTIC PROFILE OF *RHEUM RIBES*

Mehmet Kadir ERDOĞAN

Department of Biology, Faculty of Arts and Sciences, Bingöl University, 12000, Bingöl, Turkey

Rheum species are medicinally important plants due to the presence of anthracene derivatives occurring in the subterranean parts of the plant. Rheum ribes L. (Polygonaceae) is the source of one of the most important crude drugs in the Middle East, roots are used as oriental laxative medicine and an antipsoriatic drug. R. ribes is locally known as “ışkın, uçgun or, uçgun” and grown mostly in Eastern Turkey, Lebanon and Iran.

The aim of this study was to investigate the mechanism by which Rheum ribes induces antiproliferative and apoptotic effects in HT 29 human colorectal carcinoma cells. Dose and time dependent cytotoxic effects of Rheum ribes were evaluated by the 3 (4,5 dimethylthiazol 2 y1) 2,5 diphenyltetrazolium bromide (MTT) assay. Cell Proliferation Kit I (MTT) was purchased from Roche (Roche Diagnostics, Mannheim, Germany). Briefly, HT 29 cells were seeded at a 1×10^4 concentration in 96 well plates overnight and then treated with 10 μ l MTT labeling reagent. After 4 h, 100 μ l of the Solubilization solution was added into each well and incubated 24 h in a humidified atmosphere (+37 °C, 5-6% CO₂). Absorbance of the formazan product was measured at 550 and 600 nm wavelength by Elisa microplate reader. Results are expressed as a percentage of the untreated controls.

Cell Death Detection Elisa Kit (Roche) was used to detect apoptotic effect of Rheum ribes, according to the manufacturer's protocol. Additionally, propidium iodide (50 μ g/mL) and ethidium bromide (50 μ g/mL) were used for detecting the apoptotic cells. Results were evaluated comparatively and statistically.

*mehmetkadirerdogan@gmail.com