

INVESTIGATION OF THE EFFECT *PISTACIA VERA* FROM DIFFERENT REGIONS ON OXIDATIVE STRESS AND PROLIFERATION IN BREAST CANCER CELL LINE

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ABSTRACT

Objective: To investigate the effectiveness of extracts obtained from the inner shell of *P. vera* plants collected from different regions

Materials and Methods: Flavanol and methanol extracts were prepared from the inner shell of *P. vera*. The cytotoxic effects of the prepared extracts on invasive breast cancer cell lines were determined by our modified MTT cytotoxicity test. Total antioxidant and total oxidant tests were applied, and oxidative stress indices were examined. Migration test was used to investigate the effects of the agents used on the motility of the cells, and colony formation assay was performed to investigate the effect on the colony forming feature.

Results: *P. vera* methanol extracts were found to be more cytotoxic than flavanol extracts. Siirt *P. vera* Methanol extract was found to be the most cytotoxic extract. *P. vera* Urfa dissolved in methanol extract due to has high oxidative stress was the most effective in reducing migration in MDA-MB-231 cell line among the groups.

Conclusions: Urfa *P. vera* Methanol extract is most effective in invasive breast cancer cells due to high oxidative stress level that occurs.

Keywords: *P. vera*, MTT, Cytotoxicity, Migration, Colony Formation