

Effects of henna (*Lawsonia inermis*) on the apoptotic pathway of human liver carcinoma cell lines.

ABSTRACT

This study was conducted to determine the effect of henna (extract and essential oil) on the apoptotic phenomena in a human liver cancer cell lines, HepG2. It was determined by using TUNEL assay to investigate their mechanism of action and the observations were done by using Fluorescence Microscope and Confocal Laser Scanning Microscope. Results showed that the apoptotic phenomena induced by henna extract and the essential oil of henna. Many apoptotic bodies, DNA fragmentation and chromatin condensation were observed in the treated groups through the Fluorescence Microscope and Confocal Laser Scanning Microscope. In conclusion, henna may induce apoptosis in HepG2 cell lines.

Keyword: *Lawsonia inermis*; Apoptotic pathway.