

MINOR FRUITS OF JAMMU SUBTROPICS POSSESS *IN VITRO* CYTOTOXICITY AGAINST HUMAN CANCER CELLS

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Abstract: The present research work was carried out to examine the *in vitro* cytotoxic effect of four minor fruits of kandi belt of Jammu region viz., *Emblica officinalis* (amla), *Morinda citrifolia* (shehtoot), *Olea europaea* (jaitun), *Ziziphus mauritiana* (ber) against nine human cancer cell lines from eight different origins such as A-549 (lung), A-498 (renal), HCT-116 (colon), MCF-7 (breast), MDA-MB-435 (melanoma), OVCAR-5 (ovarian), PC-3 (prostate), SF-295 (CNS), T-47D (breast). Methanolic extracts of fruits were used as test material and *in vitro* cytotoxicity was determined at 100 µg/ml via SRB assay. Results revealed that all the minor fruits (except shehtoot) showed *in vitro* cytotoxic efficacy against one or the other human cancer cell line with growth inhibition range of 70-99%. Maximum growth inhibition against more number of human cancer cell lines was produced by amla followed by ber and jaitun. When evaluated at lower concentrations, ber fruit exhibits significant *in vitro* cytotoxic potential (79% & 70%) at 50 and 30 µg/ml respectively against lung cancer cell line (A-549). Ber also suppressed 70% proliferation of melanoma cancer cell line (MDA-MB-435) at 50 µg/ml. To conclude, ber possesses certain constituents with cytotoxic properties that will be effective against melanoma and lung cancer cells.

Keywords: Amla, Ber, Cancer Cells, *In vitro* cytotoxicity, SRB assay

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