In Vitro Anti-Neoplastic Properties of *Berberis vulgaris* L. var. asperma

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**Abstract:** Traditional herbal plants have played a major role in healing and preventive medicine for hundreds of years. *Berberis vulgaris* L. var. asperma is an indigenous seedless barberry fruit variety in Iran which is commonly utilized as additive in food and has been documented to possess several pharmacological properties of medical importance. This preliminary study investigated the anticancer activity of the seedless fruit ethanolic extract by determining anti-proliferative effects on human colon (HT-29) and breast cancer (MCF-7) cells via PrestoBlue® assay. Surprisingly, significant cytotoxic effects were observed with IC₅₀ values of 7.5 and 10.7 mg/mL, respectively. No cytotoxic effects were observed on normal human fibroblasts suggesting biocompatibility. These results infer the promising pharmacognostic application of the seedless *B. vulgaris* fruit as potential source of novel chemopreventive and chemotherapeutic drugs.

**Key Words:** *Berberis vulgaris*: barberry, cytotoxicity, anticancer