

Antiproliferative and antioxidant activity of *Marrubium crassidens* on the MCF-7 human breast cancer cell line

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Naturally occurring substances as novel drugs in cancer therapy at all times represent a challenge to science since medicinal plants are proving to be brilliant sources of new chemopreventive agents. In the present study, methanol extract from aerial parts of *Marrubium crassidens* was assessed for its antiproliferative activity in the breast cancer cell line MCF-7 through MTT bioassay using cell viability and cytotoxicity indices. The antioxidant property of *M. crassidens* extract together with its phenolic and flavonoids contents were evaluated, as well. According to data obtained in the study, *M. crassidens* exhibited antiproliferative activity with a gradual rise in cytotoxicity effect setting out on 240 µg/mL concentration of the extract. Moreover, the RC_{50} value for antioxidant activity of the extract was determined as 40 µg/mL and values for the total phenolic and flavonoids content was calculated as 512.64 mg gallic acid equivalent and 212.73 mg quercetin equivalent per 100 g of dry plant material. Generally, the observed antiproliferative and antioxidant properties of *M. crassidens* could be certified to the high amounts of phenolic and flavonoid content detected in the extract.

Biography

Sanaz Hamedeyazdan is a Pharm.D. and Ph.D. candidate of Pharmacognosy in faculty of pharmacy, Tabriz University of Medical Sciences, Iran. She has published more than 15 papers in reputed journals and presented different articles in several seminars and congresses. Moreover, she was selected as the 1st rank researcher and winner of Akbariye prize for the best lecturer in "12th Iranian Pharmaceutical Sciences Conference (IPSC2010)" Zanjan, Iran, August 2010. She was awarded PSE grant from Phytochemical Society of Europe in the International symposium terpenes-application, activity and analysis (TerpenIST2010) 26-29 september 2010, Istanbul, Turkey. Besides, she has been selected as the top student of the Country and was honored on 18th February 2013.

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