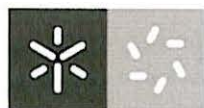
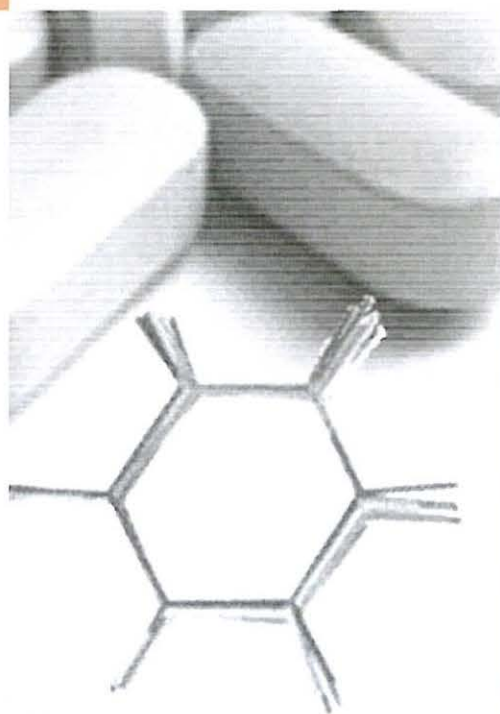


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## Evaluation of growth inhibitory activity of *Crataegus monogyna* Jacq. flower bud extracts against human tumor cell lines

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The vast structural diversity of natural compounds found in plants provides unique opportunities for discovering new drugs with possible beneficial effects on human health, including regulation of proliferation and cell death pathways leading to cancer [1]. *Crataegus monogyna* Jacq. has been studied by our research group to confirm its different alleged health benefits [2-4]. Herein, the antiproliferative activity of phenolic extracts from *C. monogyna* flower buds was evaluated on four different human tumor cell lines: HeLa, cervical carcinoma; HepG<sub>2</sub>, hepatocellular carcinoma; MCF-7, breast adenocarcinoma; NCI-H460, non-small cell lung cancer. The antiproliferative activity was measured by calculating GI<sub>50</sub> values (50% of cell growth inhibition) for each cell line, according to the procedure adopted by the National Cancer Institute for *in vitro* anticancer drug screening, which uses sulforhodamine B assay to assess cell growth inhibition [5]. The obtained antiproliferative activity was very similar among the assayed cell lines: HeLa, GI<sub>50</sub> = 63.55±3.56 µg/mL; HepG<sub>2</sub>, GI<sub>50</sub> = 88.45±8.11 µg/mL; MCF7, GI<sub>50</sub> = 66.96±0.01 µg/mL; NCI-H460, GI<sub>50</sub> = 67.61±4.29 µg/mL. The lower activity against HepG<sub>2</sub> cells might be related with the type of proliferation of this cell line, the only one with a monolayer growth type among the assayed lines. The activity demonstrated by the phenolic extract of *C. monogyna* might be explained by their high amounts in flavonoids, which are known for modulating a variety of biological events associated with cancer progression and development, such as cell proliferation, apoptosis, cell differentiation and neovascularization [3]. Accordingly, *C. monogyna* may be considered as a source of important phytochemicals with bioactive properties to be explored for pharmaceutical applications.

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