

Effects of Polyphenols from the Aroeira Plant (*Schinus terebinthifolius*) on the Growth of Prostate Cancer Cells

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Despite the existence of various types of antineoplastic treatments for prostate cancer, most of these therapeutic options induce apoptosis in the tumor cells through the use of synthetic or natural drugs. The aim of the present study was to evaluate the antiproliferative effect of methanol extracts (ME) and aqueous extracts (AE) of the leaves of the aroeira (*Schinus terebinthifolius*), a plant found in northeastern Brazil, on isolated prostate cancer cell cultures. The extracts were tested in isolated cell lines from non-hormone-dependent cancers (DU145 and PC-3), as well as in hormone-dependent ones (LNCaP). The cells were cultivated in an RPMI medium at 37°C, 5% CO₂ and a humid environment. With the exception of the control group, the methanol and aqueous extracts were added separately to the culture medium contained in each well at different concentrations. The effect of these extracts was evaluated after 3 and 6 days of cell growth. Their effect was dependent on the concentration of the extracts used in the cultures. Substitution of ME for pure methanol confirmed that the antiproliferative effects were due to the compounds present in the ME and not to the toxicity of the alcohol itself. The aqueous extract was more effective than the methanol one in inhibiting cell multiplication in all the cell lines tested. The cancer cell line most affected by the AE was DU145.

Key words: polyphenols, aroeira, prostate cancer.

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