



Anticancer Effect of Moringa oleifera Leaf Extract in Human Cancer Cell Lines

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Anticancer Effect of *Moringa oleifera* Leaf Extract in Human Cancer Cell Lines

Abstract

Many medicinal plants are used as chemo preventives and antitumor agents in numerous experimental models of carcinogenesis. *Moringa oleifera* is a plant that contains several phytochemicals, which have been used for medical purposes including anti-inflammatory, analgesic, metabolism activator, anti-asthmatic, anti-anemia, hormone-producing, liver protector, and detoxifier, among others. *Moringa oleifera* extracts have also been proposed as potential anticancer agents. Cancer is one of the main causes of deaths worldwide. Although many drugs exist against several types of cancer, more specific agents with lower side effects are necessary. Few reports exist regarding the antitumor activity of *Moringa oleifera* leaf extract in cancer cells. We investigated the effect of *Moringa oleifera* leaf extract in ovarian, prostate and breast human cancer cell lines. We hypothesized that the *Moringa oleifera* leaf extract will inhibit the growth of cancer cells.

The *Moringa oleifera* extract was tested in ovarian, prostate and breast cancer cell lines. Seventy-two hours post-treatment, the cell viability was measured by a colorimetric analysis with the AlamarBlue dye. The concentration inhibiting 50% of cell growth (IC₅₀) was calculated. The IC₅₀ of *Moringa oleifera* extract in the cisplatin-resistant ovarian cancer cells, A2780CP20, was 0.27 mg/ml. The IC₅₀ for the prostate cancer cells, PC3, was 0.17 mg/ml.

Current experiments are testing the effect of *Moringa oleifera* extract in breast, and other ovarian cancer cells.

Keywords

Moringa oleifera; ovarian cancer; prostate cancer; breast cancer



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ABSTRACT

Many medicinal plants are used as chemo preventives and antitumor agents in numerous experimental models of carcinogenesis. *Moringa oleifera* is a plant that contains several phytochemicals, which have been used for medical purposes including anti-inflammatory, analgesic, metabolism activator, anti-asthmatic, anti-anemia, hormone-producing, liver protector, and detoxifier, among others. *Moringa oleifera* extracts have also been proposed as potential anticancer agents. Cancer is one of the main causes of deaths worldwide. Although many drugs exist against several types of cancer, more specific agents with lower side effects are necessary. Few reports exist regarding the antitumor activity of *Moringa oleifera* leaf extract in cancer cells. We investigated the effect of *Moringa oleifera* leaf extract in ovarian, prostate and breast human cancer cell lines. We hypothesized that the *Moringa oleifera* leaf extract will inhibit the growth of cancer cells.

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