

## عنوان مقاله:

An in Vitro Model Study on the Effectiveness of Electrical Pulse Mediated Herbal Therapy on Breast Cancer

## محل انتشار:

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## خلاصه مقاله:

Background: Breast cancer is the most life-threatening cancer in women all over the world. Considering the detrimental side effects of standard chemo drugs, plant-based drugs can be used effectively. This work aims to investigate the effect of herbal extracts mediated by electrical pulses on breast cancer cell lines. Methods: Three different samples were chosen (Turmeric, Pepper, Neem), shade dried, and extracted using the soxhlet method, with ethanol as a solvent. These extracts were used as an anticancer drug against three breast cancer cell lines (MCF-10A, MCF-7, MDA-MB-231). Further, BTX ECM30 electroporator was used to generate electrical pulses of different parameters to enhance the uptake of extracts into the cancer cells. Realtime MT Assay was used to obtain the viability of breast cancer cell lines. A comparative study was conducted to assess the effect of each treatment on different breast cancer cell lines. Results: Treatments were more susceptible to cancerous cell lines than normal cells. Low intensity, high duration electrical pulses with herbal extracts showed a higher cytotoxic effect than other treatments. A notable increase in cell death was observed in combination treatments compared to single treatments. The lowest viability of 4% was obtained for synergetic treatment of electrical pulses and herbal extract. Conclusion: In the current study, we found for the first time that herbal extracts in combination with electrical pulses exhibited strong anticancer activity against breast cancer cell lines. This promising treatment can be used efficiently to treat breast cancer without any side effects

## کلمات کلیدی:

Herbal Extracts, Electrical pulses, Breast cancer, Treatment

## لینک ثابت مقاله در پایگاه سیویلیکا:

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