

# Investigating the Effect of Faradarmani Consciousness Field on Breast Cancer Cells (MDA-MB-231)

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## Abstract

Breast cancer is the most common form of malignancy among women worldwide and is a multifactorial disease in the development of which various factors are involved. Faradarmani Consciousness Field (FCF) was introduced by Mohammad Ali Taheri as one of many Consciousness Fields that are neither energy nor matter, nor are they quantifiable, thus they cannot be directly observed or measured. However, it is possible to evaluate their effects indirectly through controlled experiments in the laboratory. This study aimed to investigate the effect of FCF on breast cancer cells (MDA-MB-231) measured by flow cytometry methods at 24 hours. To determine the cell death in the sample treated with FCF and compare it with the control, cells were stained with Annexin-V and propidium iodide (PI). Our results showed at 24 hours, the percentage of early and delayed apoptosis and total apoptosis and necrosis in the sample under the influence of the FCF compared to the control cell lines increased by 5.92 %, 3.49 %, 9.41 % and 4.68 % respectively. Finally, the rate of programmed death of cancer cells increased up to 9.41 % under the effect of this field in the cell line in this study.

**Keywords:** Breast cancer; Taheri Consciousness Fields; Faradarmani; Cancer cells

## Introduction

Breast cancer is one of the most common cancers among women. According to the statistics of the World Health Organization, breast cancer includes about 30% of cancers among women. About 1.2 million women are affected by this disease every year. This type of cancer is reported to be the second leading cause of cancer-related deaths in women after lung cancer. It has been estimated that the prevalence of breast cancer will increase from two million patients in 2018 to more than three million patients in 2046, which represents an increase of 46% (Sung et al., 2021; Siegel et al., 2019).

Breast cancer is a disease in which malignant cells originate from the breast tissue and multiply irregularly and increasingly. These cells often originate from mammary tissues, covering cells, milk ducts, and lobules around the ducts (lobular) (Shah et al., 2014). The MDA-MB-231 cell line is related to breast cancer, and in terms of morphology, it is epithelial and spindle-shaped. The invasive power of this cell line is mediated through the ability to proteolytically alter the extracellular matrix (Chavez et al., 2010; Łukasiewicz et al., 2021). This study aimed to investigate the effect of the Faradarmani Consciousness Field on breast cancer cells (MDA-MB-231).

## Materials and Methods

### Application of Faradarmani CF

In this study, MDA-MB-231 cells were exposed to Faradarmani Consciousness Field (FCF) once from the start to the end of study (24 hours). Also, MDA-MB-231 cells, which were not exposed to FCF fields, were considered as the control group.

**Cell culture and flow cytometry:** according to general considerations.

### Results and discussion

According to the results of Table 1, a statistically significant relationship was observed between the control group and the group under the effect of FCF treatment ( $P < 0.001$ ). The results showed that the percentage of early and late apoptosis and total apoptosis and necrosis increased in the cell lines treated with FCF compared to the control (Figure 1).

Table 1. Effect of FCF on apoptosis in MDA-MB-231 cells in treated and control groups at 24-hour interval. Percentage of necrotic cells (Q1), percentage of late apoptotic cells (Q2), percentage of primary apoptotic cells (Q3) and percentage of viable cells (Q4).

|   | Q1    | Q2    | Q3    | Q2+Q3  | Q4    |
|---|-------|-------|-------|--------|-------|
| Control (-)                             | 3.72% | 0.93% | 4.68% | 5.61%  | 90.7% |
| FCF                                     | 8.40% | 4.42% | 10.6% | 15.02% | 76.6% |
| Difference of FCF from negative control | 4.68% | 3.49% | 5.92% | 9.41%  | 14.1% |

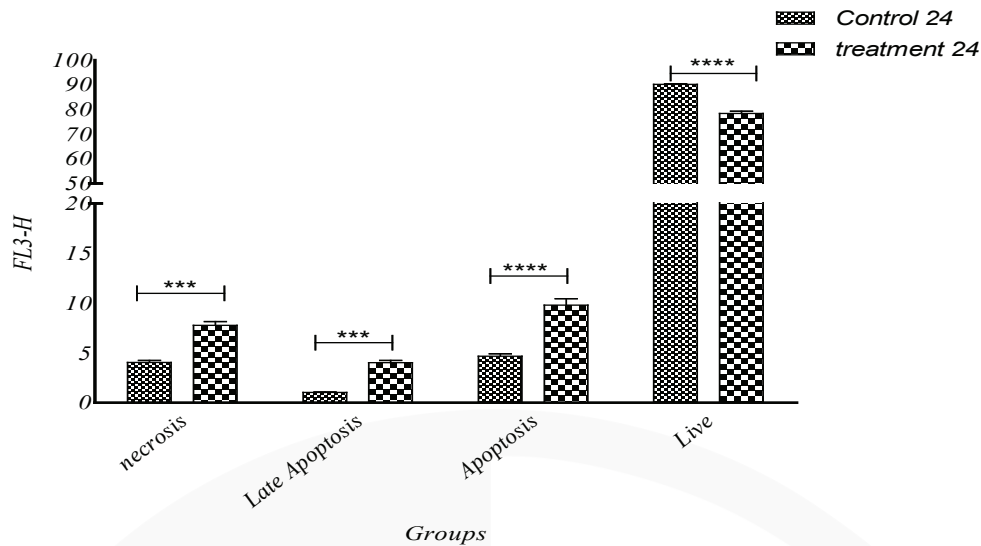


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Previously, it has already been found that the behavior of cell lines can change depending on their growth environment. For example, an enhancement of growth can be observed under two-dimensional or *in vitro* conditions (Taheri et al., 2022a). While, in mice or *in vivo* model an inhibition of metastasis has been reported (Taheri et al., 2022b). In addition to the studies on cell lines, in microbiology experiments, it has been observed that virus replication increased under the influence of this field, whereas, in rat model, FCF improved the immune response induced by an inactivated vaccine against Foot and Mouth disease (FMD) (Taheri et al., 2022c).

The findings of this study on the MDA-MB 231 cell line indicate that FCF can reduce the survival of this cell line and increase the programmed death. As a next step, we suggest that in future studies, the effect of FCF on the level of expression of apoptosis-inducing molecules such as Fas (CD95) be investigated. Also, effects of this field on the behavior of various cell lines be investigated and compared in different environment, including two and three-dimensional cell cultures and *in vivo* models.

## References

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