

## عنوان مقاله:

The Effect of Galectin-3 and MCP on Viability and Apoptosis Spheroid of Human Breast Cancer Cell Line MCF-7

## محل انتشار:

یازدهمین کنگره بین المللی سرطان پستان (سال: 1394)

تعداد صفحات اصل مقاله: 1

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## خلاصه مقاله:

**Introduction:** Galectin-3 (Gal-3) binds to cell surface carbohydrates and involves in various processes such as proliferation, apoptosis, cell adhesion, invasion and metastasis of cancer cells. Breast cancer (BC) cells form secondary spheroid tumors that binds to lymph nodes and promotes BC metastasis. MCP is pectin as derived from citrus and Gal-3 competitive inhibitor in cell surface. Increase expression of Gal-3 seen in Human BC Cell line MCF-7. The present study sought to determine role of recombinant human Gal-3 (rhGal-3) and MCP in Human BC Cell Line MCF-7 in viability and apoptosis. **Materials and method:** Hanging drop technique was used to form spheroids with 50  $\mu$ L drops containing 1000 cells (RPMI+FBS%10+Methyl Cellulose%20). drops carrier spheroid were transferred to 96 well plates agarose-coated wells after 72h and treated with 10  $\mu$ M rhGal-3 and MCP % 0/05 individually. after 48h pool of ten spheroid for MTT assay and 100 spheroid for Annexin -PI flow cytometry. **Results:** Spheroid viability was increased %32 in the presence of rhGal-3 compared to untreated ( $p < 0.05$ ) and decrease %45 in the presence of MCP compared to control ( $p < 0.05$ ). flow cytometry data showed %45.97 cells was apoptosis ( $p < 0.01$ ) and %50.41 cells is living by MCP treated **Conclusion:** Our results may suggest the importance of Gal-3 on spheroid viability of human BC cell line MCF-7. MCP is important for death cell and apoptosis by inhibition of Galectin-3 protein. we suggest that the inhibition of this protein with Chemotherapy drugs may be an effective therapeutical tool BC treatment

## کلمات کلیدی:

Breast cancer, MCF-7, Galectin-3, MCP, Spheroid

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