ID: 6604

**Congress:** 1st Tabriz International Life Science Conference and 12th Iran Biophysical Chemistry Conference

**Title:** Inhibition of Galectin-3 decreases invasion and adhesion but not migration of human ovarian cancer cell line SKOV-3

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**Abstract:**

**Introduction:** Galectin-3 (Gal-3) is known for its role in tumorigenesis and progression through regulating cell proliferation, apoptosis, cell adhesion, invasion, and metastasis by binding to the N-acetyllactosamine moiety of cell surface glycoproteins or glycolipids. SKOV-3 ovarian cancer cell line is highly metastatic and expresses Gal-3 but its function in ovarian cancer remains unknown. The aim of this study was to determine the role of Gal-3 in invasion and migration of SKOV-3 cells in the presence of Pectasol known as a competitive inhibitor of Gal-3 function.<br />

**Methods:**

Matrigel-coated transwells and wound healing assay were used for invasion and migration assay, respectively. Briefly, cells were treated for 24h with 0.1% and 0.5% pectasol, cells were stained with crystal violet and quantified. For adhesion test, pre-treated cells with pectasol for 16h were used, then trypsinized and after 30 min, 1 or 3 hours post seeding percent of adherent cells were quantified by using MTT test.

**Results:**

Pectasol (0.1%) treated cells showed 2-fold higher number of migrated cells (P<.001) and 60% decreased number of invaded cells (P<.001) compared to control (untreated). However, cells treated with higher concentration of pectasol (0.5%) showed 50% decreased cell migration (P<0.05), while invasion showed 2-fold increase (P<.001) compared to control. Adhesion assay showed decreased percent of adherent cells in pre-treated cells with pectasol compared to control (p<0.05).

**Conclusion:**

Our results suggest that Gal-3 is involved in migration and invasion of ovarian cancer cells in a dose dependent manner. Moreover, Gal-3 may increase ovarian cancer cell adhesion.

**Presentation:** Poster