Resistance to *Anoikis* Alters the Syndecan-4 Expression in Endothelial Cells in Culture

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Tumor cells present important characteristics about the changes in the mechanism of adhesion, which is related to changes in cell-cell and cell-extracellular matrix (ECM) contacts. The proliferation, invasion and maintenance of the tumors are strictly correlated to proteoglycans. The syndecan-4, a heparan sulfate proteoglycan (HSPG), has an important role in the mechanism of cell adhesion by its interaction with extracellular ligands. Changes in its expression have been observed in tumor cells, indicating its involvement in cancer, particularly in acquisition of tumor cell resistance induced by anchorage independence. In this study, endothelial cells derived from rabbit aorta (EC) were subjected to transformation induced by blockade of adhesion to the substrate (adh-EC). After one deadhesion cycle, phenotypic alterations were observed in the few surviving cells. The EC cells and adh-EC clones obtained were tested in nude mice to observe your tumorigenic capacity. Tumor development was observed in mice injected with adh-EC clones. Sulfated glycosaminoglycans (SGAG) synthetized by the cells were metabolically labeled with [$^{35}$S] sulfate (150µCi/ml). SGAG from both medium and cells were extracted by proteolysis and identified by radioautography of the agarose gel electrophoresis. An increase in heparan sulfate (HS) synthesis was detected in the adh-EC clones. Analysis of the expression of the syndecan-4 protein core by RT-PCR and heparanase expression by Real Time PCR confirm these results. Heparanase is an endo-β-D-glucuronidase capable of cleaving heparan sulfate (HS) side chains of HS proteoglycans (HSPG) and is known that this activity is related to metastatic potencial of tumor-derived cells. Similar data were observed in neoplastic transformation.

Word Keys: *Anoikis*, syndecan-4, heparan sulfate, heparanase

Supported by: FAPESP, CNPq and CAPES