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# Contribution of Thomsen-Friedenreich antigens to bladder cancer malignancy: Characterization of cell line models

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A particular type of glycans has been associated with cancer, the O-linked glycosidic Thomsen-Friedenreich (TF) antigens -T and Tn, and the sialylated forms sT and sTn. The expression of TF antigens in bladder cancer (BC) has also been reported, although the correlation with prognosis is controversial. Furthermore, the molecular basis underlying their expression and the role played by the enzymes sialyltransferases (STs), responsible for the expression of sialylated forms, are unknown [1].

For a better understanding, we chose to study the cell line models: MCR and HT1376, exhibiting a low cell surface expression of the sTn and sT respectively, that were transduced with "ST6GalNac.I" or "ST3Gal.I" STs cDNA. The resulted transduced cells $MCR_{ST6GalNac1}$ and $HT1376_{ST3Gal1}$ where purified by immune-magnetic sorting for the sTn, and selected clones for the expression of sT.

Our preliminary results show differences concerning to cell adhesion ability and immunogenicity. Namely, dendritic cells (DCs) and $MCR_{ST6GalNac1}$ in co-cultures, results in an increased expression of TGF-β and IL-10, and decreased of TNF-α and IL-6. After adhesion, MCR negative control ($MCR_{NC}$) induces higher maturation on DCs (higher expression of HLA-DR, CD80, CD83 and CD86). Concerning to phagocytosis, it was seen that $HT1376_{ST3Gal1}$ are apparently more resistant to phagocytosis by macrophages, in respect to negative control ($HT1376_{NC}$), and $MCR_{ST6GalNac1}$ less resistant to phagocytosis by DCs, in respect to $MCR_{NC}$.

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