

P031 Cell–Tenascin-X interaction: modification of structure and signaling within adhesion sites

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Tenascin-X (TNX) is a large glycoprotein of the extracellular matrix associated with collagen fibrils and other proteoglycans. TNX deficiency leads to a subtype of Ehlers-Danlos Syndrome in humans and is correlated with a more invasive phenotype in tumour-induced mice. Using HT-1080 cell line, we tried to show how TNX modulates cell behaviour. We observed that cell adhesion occurred on TNX but the addition of TNX to collagen I surprisingly modified cells' morphology i.e. cells are less spreaded with one or several elongated cell extensions. In addition, the mechanism of cell-TNX interaction remains unclear, but we found that at least one integrin is involved in this contact. The protein composition of adhesion structures localized at the front of migrating cells is modified in presence of TNX. Indeed, confocal microscopy and biochemical studies point out modifications of fascin in filopodia. Moreover, despite the initiation of focal contacts, we couldn't detect any activated FAK in cells plated on TNX. Taken together, these results suggest that TNX could regulate cell-matrix induced signalisation thus modifying cell adhesion and spreading. This constitute promising hypothesis to understand the prometastatic phenotype observed in TNX-deficient mice.