

# Soluble factors derived from tumor mammary cell lines induce a stromal mammary adipose reversion in human and mice adipose cells. Possible role of TGF- $\beta$ 1 and TNF- $\alpha$

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In carcinomas such as those of breast, pancreas, stomach, and colon, cancer cells support the expansion of molecular and cellular stroma in a phenomenon termed desmoplasia, which is characterized by a strong fibrotic response. In the case of breast tissue, in which stroma is mainly a fatty tissue, this response presumably occurs at the expense of the adipose cells, the most abundant stromal phenotype, generating a tumoral fibrous structure rich in fibroblast-like cells. In this study, we aimed to determine the cellular mechanisms by which factors present in the media conditioned by MDA-MB-231 and MCF-7 human breast cancer cell lines induce a reversion of adipose cells to a fibroblastic phenotype. We demonstrated that soluble factors generated by these cell lines stimulated the reversion of mammary adipose phenotype evaluated as intracellular lipid content and expression of C/EBP $\alpha$  and PPAR $\alpha$ . We also demonstrated that exogenous TGF- $\beta$ 1 and TNF- $\alpha$  exerts a similar function. The participatio