Researcher Profile

# Dr. Anne Lenferink

## *Investigating the role of TGF-β in tumourigenesis*

At the National Research Council (NRC) of Canada, Dr. Anne Lenferink's research focuses on the role of transforming growth factor (TGF)-β-induced epithelial-to-mesenchymal transition (EMT) during tumourigenesis in the breast. Her goal is to further the understanding of the mechanisms by which this growth factor is involved in tumour progression and metastasis, and to find novel therapeutic and diagnostic targets for breast cancer.

TGF-β can act as a tumor-suppressor in normal epithelial cells and at early stages of oncogenesis. However, TGF-β can become tumour-promoting during later stages of tumourigenesis due to its ability to induce EMT, a process that is thought to contribute to tumour progression and metastasis.

Dr. Lenferink and her colleagues have recently focused on the identification of genes that are modulated by TGF-β and whose encoded proteins play a role in the EMT inducing ability of TGF-β. In this recent study, gene expression was profiled in a mouse mammary epithelial cell line designated BRI-JM01, following a 0-24h time-course exposure to TGF-β1 using the UHNMAC Mouse 15K cDNA microarrays.

The same cell line exposed to TGF-β for 24h was also used in a proteomic study in order to identify glycoproteins, a subset of proteins that play an important role in cell adhesion, motility, and EMT, that make promising therapeutic and diagnostic targets.

Dr. Anne Lenferink works at the NRC Biotechnology Research Institute in Montreal, Canada.

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