探討 TAGLN (transgelin)在乳癌中所扮演之角色

Studies on the Role of TAGLN (transgelin) in Breast Cancer

中文摘要

本研究主要目的是探討乳癌與 transgelin 的關聯性。之前的臨床文獻指出透過利用數種不同篩選技術找尋與癌症相關的基因，發現在胃癌、胰臟癌、肝癌中 transgelin 都有被大量表現的現象，但文獻僅專注在篩選可作爲診斷用的標誌(marker)，卻沒有深入研究 transgelin 在癌症中扮演著如何的角色。本研究透過在細胞中，探討其轉錄調控作用機制；在臨床上，則是利用乳癌病人的檢體，經由 Real-time PCR 和 IHC 來觀察 transgelin 在乳癌組織中表現的情形，觀察 transgelin 與乳癌的關係及其功用。在臨床檢體上初步利用 RT-PCR 的方式發現 TAGLN 有較高的比例在腫瘤的部分被偵測到，接著利用 Real-time PCR 及 IHC 的方式去確認其再現性及分布。另一方面，在數種乳癌細胞株中 transgelin 的表現，發現在 MDA MB-231 及 MCF-10A 細胞株中 TAGLN 被大量表現。接著利用 Reporter assay 的方式探討 Transgelin 的轉錄調控機制經由哪些重要的轉錄因子去調控。

英文摘要

In this study we focus on the correlation between breast cancer and transgelin. In previous clinical studies to find a biomarker for several cancers by several screening techniques reveals that transgelin is over-expressed in gastric adenocarcinoma, hepatocellular carcinoma and pancreatic cancer, but those studies only focus on finding a potential biomarker not on figuring out how the role of transgelin in cancers. In this study we do the experiment by cell model and patient tissues. We investigate the mechanism of TAGLN transcriptional regulation in cell model and the expression of TAGLN and distribution in clinical patient tissues by Real-time PCR and IHC, so that we could find out the correlation between breast cancer and transgelin. In preliminary clinical data we use RT-PCR to detect the expression of TAGLN, and get the result that TAGLN has higher expression level in patients' tumor part. Then, we take more precise technique to check the reproducibility and distribution by Real-time PCR and IHC. At the same time, we detect TAGLN expression in several breast cancer cell lines, and find out TAGLN is over-expressed in MDA MB-231 cell line. Finally, we use reporter assay to find out what the transcriptional factor regulate TAGLN.