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Research Focus

The management of PanCa is difficult due to the lack of early diagnosis, poor response to available therapeutic modalities and drug resistance. Therefore, identification of newer approaches that can aid current therapeutic methods is highly desirable. We identified a novel interaction of oncogenic mucin, MUC13 with HER2 and MUC13 acts as a surrogate ligand to HER2 contributing to pancreatic cancer pathogenesis and aggressiveness. Clinical relevance of this interaction was studied in patient derived human pancreatic cancer tissues. These results help to delineate the complexities of pancreatic cancer by exploring the family of mucins, which through various mechanisms in both tumor cells and the microenvironment, worsen disease outcome. We have identified, for the first time, that miR-145 acts as a potent tumor suppressor in pancreatic cancer. The key outcome of the research lies in the observation of upregulated miR-145 expression in case of normal human pancreatic tissues which begins to decrease from the early onset of cancer. miR-145 is significantly downregulated in pancreatic cancer and directly targets/ inhibits the oncogenic mucin We have shown therapeutic effects of ormeloxifene on prostate cancer and demonstrated a novel molecular mechanism of its anticancer activity. Ormeloxifene treatment inhibited epithelial-to-mesenchymal transition (EMT) process *via* repression of N-cadherin, Slug, Snail, vimentin, MMPs (MMP2 and MMP3), β-catenin/TCF-4 transcriptional activity, and induced the expression of pGSK3β.