

New publication in Nature Communications

Our group discovered a novel mechanism how pancreatic cancer cells can spread into the abdominal cavity. Metastasis of pancreatic ductal adenocarcinoma cells into the abdominal cavity (the peritoneum) is a frequent event which contributes to poor prognosis. We showed that the protein HAPLN1, which modifies the extracellular matrix, is often overexpressed in pancreatic carcinoma tissue and that this protein generates a microenvironment that promotes the aggressiveness of cancer cells and also reduces the immune attack towards cancer cells. Tumors acquire HAPLN1 expression by secreting tumor necrosis factor (TNF) and this subsequently promotes cancer cell stemness, epithelial-to-mesenchymal transition, and invasion into the peritoneal cavity. As such, HAPLN1 was identified as a potential prognostic marker and as a potential target for therapy.

More:

Wiedmann L, De Angelis Rigotti F, Vaquero-Siguero N, Donato E, Espinet E, Moll I, Alsina-Sanchis E, Bohnenberger H, Fernandez-Florado E, Mülfarth R, Vacca M, Gerwing J, Conradi LC, Ströbel P, Trumpp A, Mogler C, Fischer A, Rodriguez-Vita J. HAPLN1 potentiates peritoneal metastasis in pancreatic cancer. *Nat Commun.* 2023 Apr 24;14(1):2353. doi: 10.1038/s41467-023-38064-w. PMID: 37095087; PMCID: PMC10126109.