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The scientific article entitled "Extracellular galectin 4 drives immune evasion and promotes T-cell apoptosis in pancreatic cancer" is now published in the scientific journal Cancer Immunology Research. The main objective of the journal is to publish the best new findings from leading experts in chemistry, biology and clinical science.

The paper is written by Daniel Öhlund's research group, whose ambition is to develop new strategies for the early diagnosis and treatment of pancreatic cancer. Pancreatic cancer has a very poor prognosis as it is often detected when it has already spread and there are few effective treatment options.

The focus is on studying the function of different components of the tumour stroma, which in addition to the fibrous supporting tissue consists of different cell types, including fibroblasts and immune cells.

For a cancer cell to survive, it must develop ways to evade the body's immune system. There are many ways a cancer cell can do this. Modern immunotherapy, using so-called check-point inhibitors, is an effective treatment for many cancers, and works by blocking one of these methods. However, checkpoint inhibitors are not effective on pancreatic cancer. This suggests that pancreatic cancer cells use other, as yet unknown, methods to evade the immune system.

The study identified a protein, galectin 4, as a protein that is produced by cancer cells, secreted into the surrounding tumour stroma, and there interacts with immune cells trying to enter the tumour. Once galectin 4 interacts with the immune cell, the immune cell initiates programmed cell death. Secretion of galectin 4 therefore appears to be an effective way for cancer cells to avoid being eliminated by the body's immune system. New drugs that block the function of galectin 4 could potentially be an effective treatment for pancreatic cancer.

The research team has conducted a pilot study to identify how Lumito's UCNP (Up-Converting Nano Particles) technology could be used to improve the ability to visualise protein expression in pancreatic cancer. Using Lumito's imaging technique, the team has investigated, among other things, whether galectin 4 spreads via secretion from the cancer cells into the tumour's supporting tissue, the tumour stroma. Lumito's technique has improved the ability to visualize the penetration of secreted proteins into the tumor stroma compared to other immunohistochemical methods. The pilot study was successfully completed.

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[Read the article here.](#)

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[Read the previous press release on the finalized pre-study here.](#)

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Lumito specializes in medical technology for digital pathology. Through its proprietary and patented technology, Lumito aims to provide healthcare providers with a powerful tool to meet the demands for fast and safe tissue diagnostics in personalized healthcare. The technology enables higher contrast images without irrelevant background information, making it easier for pathologists to find cancer indications. The technology, based on Up Converting NanoParticles (UCNP), has the potential to significantly improve the diagnosis of tissue samples through higher quality analyses and shortened analysis times. The method has several potential applications, but Lumito has chosen to focus primarily on digital pathology and first on a release of SCIZYS by Lumito for use in research laboratories. The company is a spin-off from a research group at the Department of Atomic Physics and Laser Centre. www.lumito.se/en

The share is traded on NGM Nordic SME, under the name LUMITO and Mentor is Mangold Fondkommission, phone: 08-503 015 50.

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