EXOSOME BASED THERAPY IN ADVANCED PANCREATIC CANCER

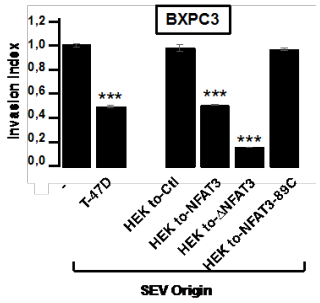
New therapeutic approach to treat stage 3 and 4 exocrine pancreatic cancer : exosomes excreted from cells highly expressing NFAT3 decrease tumors aggressiveness.

ERGANEO
L'AVENIR EST FAIT D'AUDACE

PRESENTATION

Pancreatic ductal adenocarcinoma (PDAC) is the fourth leading cause of mortality in western countries. The prognosis for pancreatic cancer patients is very low. Patients with locally advanced disease have a median survival time of 8 to 12 months, which drops to 3 to 6 months with distant metastasis. Surgical resection is potentially the only curative treatment approach but possible in only 20% of patients. Gemcitabine has become the standard-of-care treatment in 1997 for resected pancreatic cancer patients, as well as locally-advanced and metastatic setting, either as a monotherapy or in combination (with Abraxane or Tarceva). However, benefits are limited, and primary goals of treatment for advanced pancreatic cancer remain palliation and lengthened survival.

The present offer relates to the use of therapeutic exosomes as an advanced pancreatic cancer treatment and metastasis inhibition. These exosomes are produced from non-tumoral cells (HEKs) that highly express NFAT3, a transcription factor known to decrease cancer cell motility. In vitro evaluation revealed that these exosomes significantly decreased (up to 80%) the invasive capacity of solid tumor cancer cells in a pancreatic cell line (BXPC3). Preliminary in vivo experiments in a xenograft model of PDAC in nude mice are ongoing. This exosome based therapy can be considered as a new promising strategy.



Exosome - NFAT3 - PDAC - Pancreatic cancer

COMPETITIVE ADVANTAGES

- Produced by non-tumoral cells
- High tumor infiltration
- Non-immunogenic
- High stability
- First in class strategy in PDAC

INTELLECTUAL PROPERTY

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APPLICATIONS

Treatment of advanced pancreatic adenocarcinoma (stage 3 and 4)
Treatment of other solid cancers (glioblastoma, breast cancer, melanoma,...)

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DEVELOPMENT PHASE

- Ongoing in vivo PoC in a xenograft of PDAC in nude and in humanized mice