EV-MIME

Use of therapeutic extracellular vesicles as advanced treatment for metastatic triple negative breast cancer and pancreatic cancer.

ERGANEO
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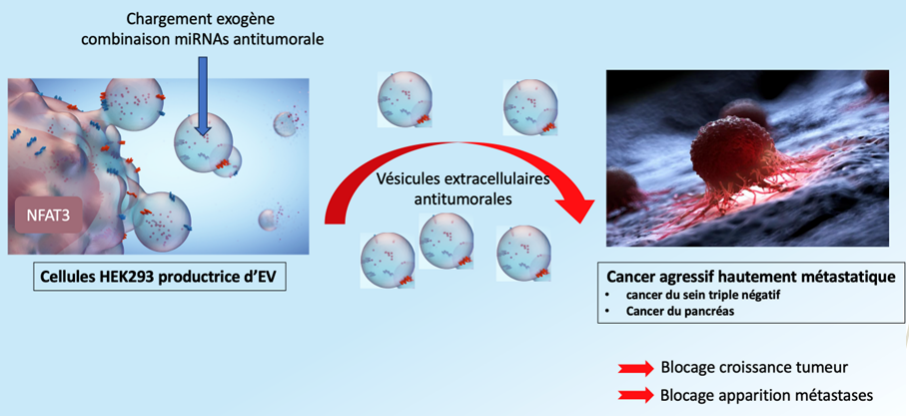
PRESENTATION

Extracellular Vesicles (EVs) are produced from HEK293T cells that highly express NFAT3 transcription factor that inhibits cancer cell motility and are loaded with a combination of miRNAs inhibiting tumor growth and cell motility. *In vitro* evaluation revealed that these EVs significantly (80%) decrease invasive capacity of triple negative breast (MDA-MB-231, SUM-59PT) and pancreatic (BXPC3, MIA-PACA-2) cancer cell lines. These results were confirmed *in vivo* in a triple negative breast cancer mouse model.

APPLICATIONS

- Adjuvant therapy for triple negative breast cancer or pancreatic cancer as a single agent or in combination with other drugs
- Neoadjuvant therapy for triple negative breast cancer or pancreatic cancer as a single agent or in combination with other drugs

Extracellular Vesicles - NFAT3 - miRNA
Triple negative breast cancer - Pancreatic cancer



COMPETITIVE ADVANTAGES

Mostly, the potential competitors' approaches are solely at the early stage (proof of concept (PoC) to preclinical stages) and absence of available data did not allows direct comparison with this product.

DEVELOPMENT PHASE

- ☑ Completed *in vivo* PoC for EVs derived from HEK293T overexpressing NFAT3 in an athymic nude mouse model xenografted with a triple negative breast cancer line (MDA-MB—231) (TLR5)
- ☑ Ongoing *in vivo* PoC for EVs loaded with an anti-tumor combination of miRNAs in an athymic nude mouse model xenografted with a triple negative breast cancer line (MDA-MB—231) (TLR4)

INTELLECTUAL PROPERTY

Two patent applications:
WO2017167788A1 and WO2022136226A1

PUBLICATIONS

- de Camargo LCB *et al.* Sci Rep 2020 (10), 8964.
- Fougère M. *et al.* Oncogene. 2010 (15), 2292-301.
- Coillard L. *et al.* Front Oncol. 2022 (12), 804868. Erratum in: Front Oncol. 2022 (12), 1016189.
- de AKA S. *et al.* Adv Drug Deliv Rev. 2021 (179), 114001.

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