Biology / Health

TREATMENT OF HER2+ CANCER USING AN AGENT THAT MODULATES THE ACTIVITY OF A MIRNA

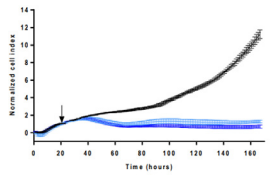
Use of anti-miRs ASO strategies as therapeutic tools for HER2+ breast cancers.

ERGANEO
L'AVENIR EST FAIT D'AUDACE

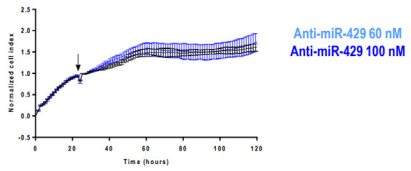
PRESENTATION

Approximately 25% of primary human breast cancers are due to deregulated ErbB2/HER2 expression. Therapies targeting HER2 have improved patient survival, but de novo and acquired resistance remain a challenge, with only 25% of treated patients responding to current therapies. The researchers identified several miRNAs in the miR-200 family that are upregulated in HER2+ breast cancer cells and tumor samples and whose high expression levels are associated with worse prognosis in HER2+ breast cancer patients. They designed, optimized and validated a novel biotherapeutic ASO molecule for the inactivation of miRNA-429 for the treatment of cancers with HER2 abnormalities, including HER2+ breast, gastric and ovarian cancers.

BT474 (HER2+)



MDA-MB231 (HER2-)



HER2+ cancers - Breast, gastric, ovarian cancers
Targeted Biotherapies - MiRNA
Personalized medicine - Antisense oligonucleotides

APPLICATIONS

- Novel anti-miRNA biotherapy based on an ASO strategy
- HER2+ cancers, including breast, gastric and ovarian cancers

COMPETITIVE ADVANTAGES

- Therapeutic efficacy on HER2+ breast, gastric and ovarian cancer cells, including tumors that are resistant to the current therapeutic arsenal.

INTELLECTUAL PROPERTY

WO 2019/081607; US, JP, EP

DEVELOPMENT PHASE

- ☑ MiRNA loss-of-function and inactivation experiments showing reduced cell proliferation and apoptosis induction of HER2+ cells via HER2
- ☑ ASO molecular optimization and liposomal encapsulation
- ☑ In vitro proof of concept in breast, ovarian and gastric cancer cells / In vivo proof of concept currently on-going

CONTACT

+33 (0)1 44 23 21 50
industriels@erganeo.com
Ref. project : 414a