Serotonin (5-HT) has emerged as an important regulator of cell proliferation and tumor growth in a variety of tissues. The modulation of 5HT metabolism appears as an innovative strategy in cancer therapy. We have demonstrated that high HTR1D expression in TNBC patients is associated with advanced disease, rapid disease progression, and poor survival. The correlation between HTR1D expression and highly aggressive TNBC makes the HTR1D an attractive target for treatment. Moreover, the expression level of HTR1D provides a new method for stratification of TNBC patient management and selection for further anti-HTR1D targeted therapies.

**APPLICATION**

- **In vitro method** using an inhibitor of HTR1D to treat cancer.
- **In vitro method** for cancer diagnosis, stratification and/or prognosis method comprising a step of measuring the expression level of HTR1D.

**PROBLEM ADRESSED**

Triple negative breast cancer is the poorest breast cancer subtype with no targeted therapy option. Despite an initial good response to chemotherapy, more than a half (65%) do not achieve a pathological good response (pCR) and tumors relapse. There is a need to identify and develop new therapeutic targets to develop targeted therapies for this highly heterogeneous subtype.

**COMPETITIVE ADVANTAGES**

- Targeted therapy
- Several existing molecules
- Co-development of CDx
- Potential to address significant unmet medical need
- Drug repositionning strategy

Inhibition of HTR1D decreases cell viability in TNBC models/cell lines
DEVELOPMENT STATUS

HTR1D receptor is overexpressed in luminal and triple negative breast cancer. Breast cancer patients and notably TNBC patients expressing high levels of HTR1D are associated to a significant poor prognosis. Inhibition of HTR1D in vitro with antagonist compounds shows a decrease in a panel of TNBC cell viability.

IP STATUS & OWNERS


WHAT ARE WE LOOKING FOR?

Interested partners for licensing and collaboration for development, exploitation and commercialization of therapeutics and/or diagnostic products targeting HTR1D.

PUBLICATIONS

Submitted

INVENTORS

ALICE PINHEIRO
Sergio ROMAN-ROMAN

CONTACT

CHRISTELLE MASDEU PhD
Business Manager
Phone: + 33 1 56 24 67 79 / +33 6 29 75 69 83  
christelle.masdeu@curie.fr

TECH TRANSFER AND INDUSTRIAL PARTNERSHIPS OFFICE
Institut Curie
26 rue d’Ulm 75005 Paris France
https://techtransfer.institut-curie.org