# TECHNOLOGY OFFER

Predictive method of the cardiotoxicity risk in cancer patients treated with anthracyclines (MIRCATOX)



### **INTELLECTUAL PROPERTY RIGHTS**

Co-ownership of IIS La Fe (88%) and Maastrich University (12%).

Priority right: EP18248213 / PCT/EP2019/085388 National Phases: US17418725 and European Patent 19817374.2



The development is in level TRL 4/5. The technology has been tested in a cohort of 150 patients, obtaining a specificity of 80%. The next step will consist of the clinical validation of the test, for which a collaboration has been established with other hospitals for the recruitment of patients.

## **DESCRIPTION OF THE TECHNOLOGY**

MIRCATOX is a miRNA based signature capable of predicting cardiotoxicity caused by anthracyclines, a major component of chemotherapy Anthracyclines are common antineoplastic drugs used for the treatment of breast cancer after resection of the tumor (adjuvant therapy) The effectiveness of this drug is undermined by several collateral cardiac toxicity due to the induction of oxidative stress effects including (generation of ROS species) in the cardiomyocyte that in some patients lead to a fatal cardiac dysfunction years after the drug treatment.

This signature of miRNAs can be used in a diagnostic test of cardiotoxicity Circulating miRNAs can be detected in serum or plasma from healthy donors and patients by qPCR, so samples necessary for the test can be obtained easily and the test can be included in the usual analysis performed to patients MIRCATOX can obtain a predictive value for cardiotoxicity in response to



The market application sector is either public or private healthcare systems. MIRCATOX can become a diagnostic test for cancer patients awaiting treatment.

#### anthracyclines as a result of measuring the number of copies of a combination of circulating miRNAs in cancer patients waiting for treatment.



## COLABORATION SOUGHT

We seek a company in the field of diagnostic kits, for the patent license and its commercialization..



- The only genetic test that predicts anthracycline cardiotoxicity before providing treatment to the patient.
- It minimizes the cost of future treatments and represents a saving for the health system.
- Helps to prevent heart disease caused by anticancer treatment.

### TTO/Innovation Department HEALTH RESEARCH INSTITUTE HOSPITAL LA FE

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