

NOVEL BIOMARKERS IN THE EARLY DETECTION OF COLON CANCER ASSOCIATED WITH OBESITY

A research group from IMIBA centre and CIBER has identified potential biomarkers linked to colorectal cancer associated with obesity, based on alterations in RNA methylation in specific regions of the transcriptome.

The Need

Currently, technologies such as colonoscopy, computed tomography, blood tests or detection of tumor markers are used to detect colorectal cancer (CRC). These technologies are used in the general population, without there being any product for a specific CRC detection/diagnosis for obese subjects. Most products used for CRC screening are invasive or unreliable, requiring repeated tests. Until now, epigenetic tools currently remain insufficient to replace colonoscopy.

The Solution

Epigenetic biomarkers could overcome the limitations of current techniques, being less invasive and more sensitive and specific for early detection of CRC, thus achieving an increase in the survival rate of the patients. However, implementation in clinical routine is still low.

This technique is based on the detection of modifications of RNA closely related to the clinical characteristics of CRC patients, and could help detect, diagnose and monitorize these patients.

Innovative Aspects

- They are safe (noninvasive), comfortable (do not require sedation) and accessible (obtained from a blood sample).
- They are based on modifications of RNA closely related to the clinical characteristics of patients, which gives greater potential in the diagnosis of tumors.
- The identification of epigenetic biomarkers specific to cancer in the presence of obesity will more accurately favor the early detection of CRC in the group of obese subjects, compared to those currently used
- These biomarkers could help in early detection of CRC, helping to greatly reduce mortality rates
- The biomarkers allow the possibility of combining them, contributing to the increase in sensitivity and specificity for the early detection of CRC
- The biomarkers could also allow the monitoring of the effect of therapies in obese subjects.

Stage of Development:

Biomarkers linked to colorectal cancer associated with obesity have been described, based on alterations in RNA methylation in specific identified regions of the transcriptome.

Intellectual Property:

- Priority patent application filed

Aims

Looking for a partner interested in a license and/or a collaboration agreement to develop and exploit this asset.

Contact details