

# TARGETED INTERVENTIONS DIRECTED AT REDUCING THE LEVELS OF CIRCULATING SUCCINATE IN A SUBJECT

## INNOVATION AND DESCRIPTION OF THE TECHNOLOGY

Cardiovascular disease (CVD) is a collective term used to describe heart and blood vessel disorders and constitutes the leading cause of death worldwide. In developed countries, CVD usually manifests as coronary artery disease, atherosclerosis and hypertension, with central obesity playing an increasingly important role as a risk factor. Metabolic sensors and gut microbiota are well-recognized biological drivers of obesity and type 2 diabetes. Elevated levels of circulating succinate, a tricarboxylic acid metabolite produced by some bacteria, is increased in obese patients and is a good metabolic biomarker for the glucemic control. Modifications in gut microbiota is highly valued as a potential treatment for obesity.

The present work demonstrates that succinate produced by bacteria of the gut microbiota is an essential contributor to total circulating succinate levels. Thus, the ratio of succinate-producing bacteria to succinate-consuming bacteria, measured in a stool sample from a subject can be related to circulating succinate levels.

## MARKET AND ADVANTAGES OF THE TECHNOLOGY

The present invention comprises a kit to measure the ratio of succinate-producing bacteria to succinate-consuming bacteria, a diet intervention and a pharmacological or probiotic product directed at modifying the ratio of succinate-producing bacteria to succinate-consuming bacteria in order to improve metabolic profile of obese patients.

## IPRS AND CONTACT

This technology was developed by CIBERDEM research groups : <http://www.ciberdem.es/>

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