

# NEW PHARMACEUTICAL COMPOSITION TO TREAT DISEASES RELATED WITH FAT TISSUE DEPOSITION

Researchers from CIBER, Institut d'Investigació Biomèdica de Girona Dr. Josep Trueta and Centre Tecnològic de Catalunya have obtained a combination of amino acids to be used in diseases by lipid accumulation in tissues .

## The Need

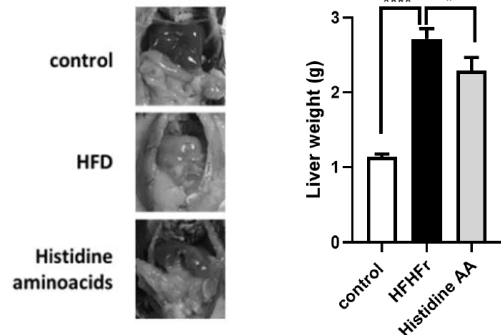
Due to the increased and worldwide extended consumption of a diet know as Western diet, including processed food and food rich in fat, diseases or disorders related with the deposition of fat tissue within several parts of the body, including viscera, blood vessels and subcutaneous tissue, are a trend involving not only high costs for the health system but also and most important health problems in the subjects. Examples of these disorders are the obesity with the associated visceral fat accumulation, atherosclerosis and the fatty liver diseases.

## The Solution

It has been obtained a combination of histidine, cysteine, serine and carnosine that is able to reduce liver injury, said injury seen macroscopically in terms of liver weight, whitish and fatty liver; and at biochemical level by the analysis of the levels of alanine aminotransferase (ALT) and aspartate aminotransferase (AST). The combination of the compounds also decreased hepatic lipid content and liver steatosis. The supplementation of a diet with the combination of the compounds reduced hepatic inflammation associated to non-alcoholic fatty liver disease (NAFLD), increased the antioxidant defence and antitumoral activity, and reduced resistance to insulin.

## Innovative Aspects

- It is a new alternative approach to face all these diseases or disorders associated with fat deposition in tissues.
- The combination of three or more of these compounds allowed reverting the NAFLD symptomatology in an animal model of the disease.



It shows the effects of treatments on liver weight, a representative macroscopic appearance of livers.

## Stage of Development:

It has validated in vivo essays in mice

## Intellectual Property:

- European patent filed (April 2022)

## Aims

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

## Contact details