

## OLHHA for treatment of non-alcoholic fatty liver disease

CSIC, IMIM and IMABIS Foundation have developed a method for treatment of non-alcoholic fatty liver diseases, in particular steatohepatitis, based on the use of a family of fatty acid amides with phenylalkylamines related compounds (OLHHA), which induce a reduction of liver damage. In addition, they can be used to control of obesity by means of a nutritional supplement.

*An offer for Patent Licensing and/or R+D collaboration*

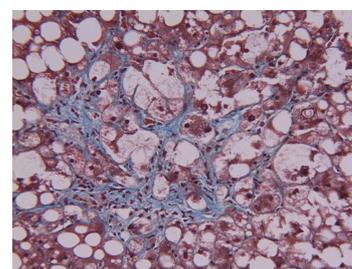
### NASH treatment and antiobesity properties

Non-alcoholic fatty liver disease (NAFLD) is the most rapidly increasing cause of liver disease in the western world. A more advanced stadium of NAFLD is non-alcoholic steatohepatitis (NASH) that can lead to cirrhosis and hepatocellular cancer. NAFLD/NASH are associated to obesity, insulin resistance and metabolic syndrome, although not all patients suffer from one of these conditions.

The use of OLHHA and related compounds induce a decrease in liver damage markers, such as transaminases (ALS and ALT) and triglyceride levels and a reduction of liver fat in obese Zucker rats models. In addition, the hepatoprotective effect is associated with a down-regulation of genes involved in the lipogenic pathway in the liver of obese rats.

Because of the common nutritional origin of NASH, food products able to confer protection against this disease are of maximum interest. Thus, OLHHA could be used as a pharmaceutical drug or as a nutritional supplement in foodstuff for prevention and treatment of NASH.

This method could be also used to treat alcoholic steatohepatitis (ASH).



Histology of a liver with non-alcoholic steatohepatitis

### Main advantages and applications

- These compounds ameliorate the obesity-associated fatty liver by inducing hepatic lipid clearance.
- Safe pharmacological profile, low toxicity, no cardiotoxicity and little interactions with metabolizing enzymes (no drug-drug interaction expected).
- Useful also as preventive treatment for people suffering from diabetes, obesity or alcoholism which are prone to suffer steatohepatitis.

#### Patent Status

Spanish patent application filed

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