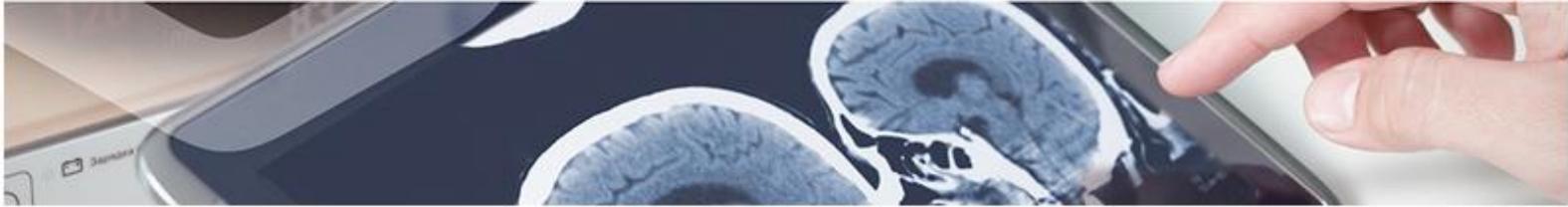


## Biotech-Pharma (Therapy)

# Nanoemulsions for the transfer of useful fatty acid derivatives in the treatment of obesity

A group from Andalusian Public Health System (SSPA) and researchers from the University of Granada have designed and developed practical nanoemulsions for the transfer of useful fatty acid derivatives, N-acylethanolamines, of use in the treatment of obesity.



### Description

According to the WHO:

- Obesity has reached epidemic levels globally in the 21st century.
- It is the fifth leading risk factor for global deaths.
- In 2015 it is estimated that over 2 million adults will suffer from overweight and around 700 million from obesity.
- 44% of the burden of type 2 diabetes can be attributed to obesity and overweight.

N-acylethanolamines are associated with energy balance, appetite control and body fat. It is therefore considered a validated pharmacological target for the treatment of obesity.

To date, different pharmacological solutions have been described; either because of their level of toxicity or the incorrect administration of the active element, they have been ruled out as medicinal products for obesity.

A research group from the Andalusian Public Health System has developed nanoemulsions that are able to transfer N-acylethanolamines without showing any of the above-mentioned problems of toxicity or administration.

These nanoemulsions have been evaluated in Wistar rats over three weeks, in comparison with other vehicles typically used for liposoluble drugs. The results show a significantly improved toxicological profile for these nanoemulsions compared with other pharmacological vehicles. In addition, studies were conducted to determine whether the drug was released correctly and its subsequent absorption. The data obtained lead to the conclusion that these nanoemulsions are also well absorbed in the gut.



### Advantages

1. The use of nanoemulsions as a transfer system increases the drug's duration of action, given that it produces a controlled release of the drug.
2. Nanoemulsions are stable over time, have a low toxicological profile and are well absorbed in the gut.
3. They permit oral administration of the drug with its release in the gut, since it prevents previous hydrolysis in the stomach.
4. The procedures for obtaining these nanoemulsions are simple and avoid extreme conditions such as high temperatures.



### Intellectual Property

This technology is protected by patent.



### Aim

The research group is looking for a license or a collaboration agreement.



### Classification

Area: Biotech-Pharma (Therapy)  
Technology: Nanotechnology and Nanomedicine  
Pathology: Metabolic Diseases and Endocrinology