

A lipidic extract rich in sphingolipids showing preclinical efficacy in reduction of hepatic lipidosis

Biosfeen^{®2}

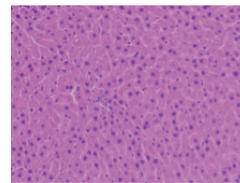
The problem

Obesity is the most prevalent nutritionally related disease of dogs and cats, and the prevalence is increasing.

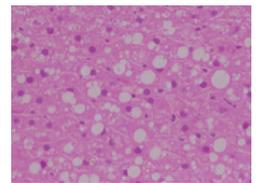
Cats are particularly sensitive to hepatic lipidosis. **Feline hepatic lipidosis (FHL)** is a common and potentially fatal liver disorder.

Mortality rate of 38% has been reported and drugs to directly target lipidosis are not available.

Normal liver



Fatty liver



Obesity

DRIVERS

- Neutering
- Overfeeding
- Sedentarism



OBESITY (excess body fat)



RELATED DISEASES

- Orthopedic disease
- Endocrine dysfunction
- Diabetes (feline)
- Lower urinary tract disease
- **Fatty liver**
- Oral disease
- Neoplasia

The market & the opportunity

Obesity, defined as the excess of body fat, has been reported to be the second most prevalent health problem of the domestic cat population in developed countries¹. Hepatic lipidosis is characterized by the accumulation of triglycerides in the liver and is considered one of the most common liver diseases². Dietary management is one of the pillars of the treatment for obesity and its associated hepatic lipidosis.

The addition of Biosfeen-2 to weight management diets could help to promote fat loss and particularly aid in the dietary management of hepatic lipidosis.

Proposed solution

Obesity increases the risk of endocrine dysfunction, fatty liver, orthopedic disease, lower urinary tract disease, neoplasia, etc...

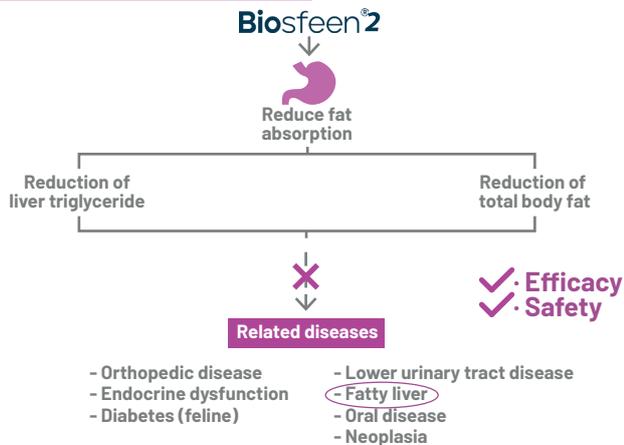
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A lipidic extract rich in sphingolipids showing preclinical efficacy in the dietary management of hepatic lipidosis

- Lipidic extract from porcine intestinal mucosa.
- Reduces **dietary fat absorption**.
- General **reduction of body fat** and specific **reduction of liver triglycerides**.

Available key resources

Mechanism of action



Existing valuable partners



- A. RTC / Citoxlab: Safety studies
 B. Eurecat:
 C. Preclinical efficacy studies in rat and hamster models triformed: Business development

Partnering model

Bioiberica is looking for partner(s) to finalize the development and bring Biosfeen-2 to the market.

Activities that have been done/will be led by Bioiberica:

- Safety studies**
 - Mutagenicity and genotoxicity
 - Single dose toxicity
 - 2-week oral toxicity
 - Subchronic toxicity in rats
- Efficacy studies – preclinical models (rat model of metabolic syndrome and hamster model of hypercholesterolemia)**
- Manufacturing of the ingredient**
- Manufacturing of the final product (in the case of pet supplement)**
- Regulatory approval of the ingredient**
- Regulatory approval of the final product (in collaboration with the partner)**

Activities that will be led by the partner(s):

- Additional clinical studies (if needed)**
- Manufacturing of the final product (in the case of pet food)**
- Regulatory approval of the final product (with the support of Bioiberica)**
- Commercialization (marketing, distribution and sales) of the final product**

References:

- Rowe et al. *Prev Vet Med.* 2015;121(3-4):273-281.
- Armstrong & Blanchard. *Vet Clin North Am Small Anim Pract.* 2009;39(3):599-616.

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Bioiberica at a glance

Bioiberica is a global life science company, founded in 1975 that is committed to improving people, animal and plant health. We work to identify, extract and develop quality APIs and ingredients and turn them into high-quality products to advance in the pharmaceutical, nutraceutical, veterinary, feed and agricultural industries.

Since then, we have continued to identify and develop biomolecules of high biological and therapeutic value, extracted from tissues of animal origin. Bioiberica has different business units: heparin science, healthcare, companion animal health, animal nutrition and plant health.

Bioiberica in numbers

- Team: **450+** exceptional professionals passionate about their work
- Portfolio: **100+** products to improve human, animal and plant health
- Industrial dimension: **8 production centers** in Spain, Italy, Poland, Germany, the US and Brazil
- International presence: **80+** countries, where we sell our products