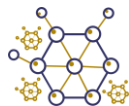


Leptin immunosuppression for obesity treatment



Business area

Discovery

Market sector

Obesity

Medical Indication

Obesity, Morbid obesity

Research goal

Use of Leptin as a method of treatment for obesity and other leptin-resistance associated diseases.

Problem to solve

Obesity is growing to the point that the World Health Organization has recognized it as one of the 10 biggest global health problems and the pathology that will generate more associated costs during the 21st century. In addition, obesity leads to a higher prevalence of co-morbidities such as type 2 diabetes, hypertension, musculoskeletal conditions such as osteoarthritis or rheumatoid arthritis, cardiovascular diseases and some types of cancer, leading to a reduced life expectancy and a strong influence on the economy. Weight loss improves or resolves the comorbidities associated with this disorder. However, the drugs developed so far have not been successful, with diet and exercise being the cornerstones of obesity treatment. Unfortunately, the weight loss achieved even with dietary treatments and exercise is unsustainable over time and followed by a regain of previous body weight. In the case of severe obesity, bariatric surgery is the only effective therapy providing more consistent and long-lasting weight reduction than pharmacological and behavioral interventions. However, it is an invasive, complication-prone, and expensive therapy.

Innovation

Since the problem is the high concentration of circulating leptin, our technology seeks to eliminate or reduce its levels so that the leptin transporters are resensitized at BBB level to restore sensitivity.

The invention is based on the use of anti-leptin antibodies as a strategy to combat obesity. The use of antibodies would trigger an immune response that would temporarily eliminate endogenous leptin produced by adipose tissue.

Market opportunity

The obesity market generated approximately \$ 407 million in global sales in 2012. The market is expected to grow to reach \$ 8.4 billion by 2020, with significant growth in the main obesity markets, such as the United States, Canada and Brazil. Several market studies place the growth of the anti-obesity drugs market at a CAGR of between 20% and 40% per year

Research team

Molecular Endocrinology Research Group of the Health Research Institute of Santiago de Compostela:

- **Marcos Couselo Carreira:** PI of the project.
- **Felipe Casanueva Freijo:** Head of Endocrinology at University Clinical Hospital of Santiago de Compostela.
- **Ana Belén Crujeiras Martínez.**

Intellectual property

EP18382204.8 "Anti-leptin Affinity Reagents For Use In The Treatment Of Obesity And Other Leptin-resistance Associated Diseases"

Development stage:



Available for: *Licensing, co-development*

