

Using cardio-metabolomic diagnosis to reduce the consequences of obesity

Obesity has attained epidemic proportions worldwide and is behind the increase in cardiovascular and hepatic diseases

The tools to face the impact of obesity and associated diseases are prevention and ongoing monitoring

Biotech company OWL Metabolomics develops non-invasive, early diagnosis products for obesity-related diseases

(Bilbao, 16 March 2021). – Certain 'silent' pandemics, while not as obvious as COVID-19 or responsible for such sharp spikes in mortality rates, spread over time and lead to a great many deaths. One of these is obesity, a complex disease which appears over time and is linked with sedentarism, unhealthy eating habits and a lack of exercise, among other factors. According to the [WHO](#), obesity has reached epidemic proportions and is responsible for at least 2.8 million deaths worldwide.

Obesity affects and alters our metabolism, triggering a series of syndromes which may have serious effects in a very short time, including cardiovascular diseases, currently the leading cause of deaths worldwide. It also contributes to diabetes and may affect the liver, among other organs, heightening the risk of serious disorders such as non-alcoholic steatohepatitis (NASH), which may, in turn, lead to cirrhosis or liver cancer.

How do we tackle this pandemic? Ángel Santos, CEO of [OWL Metabolomics](#), a Basque-based biotechnology company which develops early diagnosis products, has no doubt that prevention is key. He explains that "prevention requires us to have metabolomic information, which gives us the starting point and shows where the disease is heading, detecting bio-markers to understand each person's metabolic risk and monitoring that risk."

R&D in the service of non-invasive, early diagnosis

While preventive diagnosis is currently one of the best tools we have to reduce the impact of obesity on the population, prevention and monitoring are also invaluable from the point of view of public health and healthcare spending. As OWL Metabolomics CEO explains, “cardio-metabolomic diagnosis is more of an investment than an expense, averting much of the healthcare expenditure associated with these diseases by preventing more costly interventions down the line.”

In this regard, OWL Metabolomics offers a non-invasive early diagnosis tool, the OWLiver test, the first non-invasive metabolomics in vitro test capable of differentiating non-alcoholic fatty liver (NAFL) from NASH. The fundamental difference between fatty liver and NASH is precisely the increased cardiovascular risk presented by the latter, which is why the diagnosis with OWLiver allows a more direct follow-up of the patient to change their habits towards a healthier lifestyle.

The test offers an alternative to the liver biopsy, doing away with its high cost and invasive nature, which makes OWLiver the ideal tool for early diagnosis and patient monitoring.

OWL's research team is also currently developing a new product to evaluate metabolic syndrome and obesity-related cardiovascular risks, allowing clinicians to diagnose the cardiovascular risk level of their patients and assess their evolution.

These diagnosis products are based on metabolomics, an exhaustive analysis of small molecules in biological systems to develop early diagnosis tools for associated diseases. The study offers an overall view of the patient's metabolomic status, highlighting changes in metabolomic pathways, providing important information regarding the patient's physiological status and pathologies to be prevented.

OWL's in-depth understanding of metabolomics also means that they can offer R&D services to a range of sectors, including pharmaceuticals, food production, nutrition, and cosmetics, as well as research groups and centres and biotech companies active in other spheres.

About OWL

OWL is a global metabolomics service provider to the pharma industry with a main focus supporting clinical trials in liver diseases and other prevalent human diseases as well as research in indications where metabolomics plays a key role including drug therapy monitoring and biomarker discovery.

Press release



Since its inception in 2002 the Basque company has collaborated with numerous NASH pharmaceutical and biotechnology companies and research organizations around the world within the liver field thanks to the creation of its exclusive metabolomic analysis platform. In addition, it participates in the two international consortia (LITMUS and NIMBLE) created to find non-invasive and reliable systems to replace liver biopsy in the diagnosis and prognosis of NASH.

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