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PRESS RELEASE

## VALBIOTIS: LpD64 acts on alterations of the microbiota involved in the development of obesity.

- A comprehensive effect of LpD64 on the gut microbiota, with a positive impact on microorganism populations involved in the development of obesity (preclinical)
- A combined metabolic effect: less gain in fat mass following a high-fat diet and an improvement in insulin sensitivity (preclinical)
  - Results obtained in partnership with Prof. Patrice CANI and the Catholic University of Louvain, presented at the International Keystone Symposium in Banff (Canada) on March 6, 2018

La Rochelle, 6 Mars 2018 (5:35 pm CET) - VALBIOTIS (FR0013254851 - ALVAL / PEA/SME eligible), a company that specializes in developing innovative nutrition solutions designed to prevent cardiometabolic diseases and provide nutritional support for patients, announces that it has proven a significant effect of LpD64 on the gut microbiota disorders involved in the development of obesity, in murine models. This effect is linked to an improvement of metabolic parameters. All of these selected results are being presented at the International Keystone Symposium "Manipulation of the Gut Microbiota for Metabolic Health" on March 6, 2018 in Banff (Canada).

Obesity is a multifactorial disorder that affects 650 million adults around the world<sup>1</sup>. Its management mainly consists of reducing overweight and associated metabolic disorders, by making nutritional and lifestyle changes. In light of their strong links with the development of obesity, imbalances in the gut microbiota have become a very promising target for developing new prevention strategies<sup>2</sup>.

VALBIOTIS develops LpD64, a product designed for overweight or obese people. The data presented today at International Keystone Symposium demonstrate a significant impact of LpD64 on imbalances in the microbiota involved in the development of obesity, as well as a reduction in fat mass gain in models fed with a high-fat diet. These effects are associated to significant improvement in insulin sensitivity.

<sup>1</sup> World Health Organization, October 2017, <http://www.who.int/mediacentre/factsheets/fs311/en/>

<sup>2</sup> CANI P. *et al.*, Diabetes, obesity and gut microbiota, Best Practice & Research Clinical Gastroenterology, 2013

Sébastien PELTIER, CEO of VALBIOTIS comments: "With the help of our academic partners, we can now demonstrate a major effect of LpD64 on alterations of the gut microbiota involved in obesity. Linked to a clear improvement in metabolism, in particular insulin sensitivity, this effect confirms that LpD64 is beneficial for people with overweight or obesity. Waiting for the end of the Phase I / II clinical study which is currently ongoing, the results presented today in Banff validate VALBIOTIS's expertise in the microbiota sector, which is now considered critical in the prevention of cardio-metabolic diseases.

## LpD64: a targeted effect on alterations of the gut microbiota involved in the development of obesity and associated metabolic disorders.

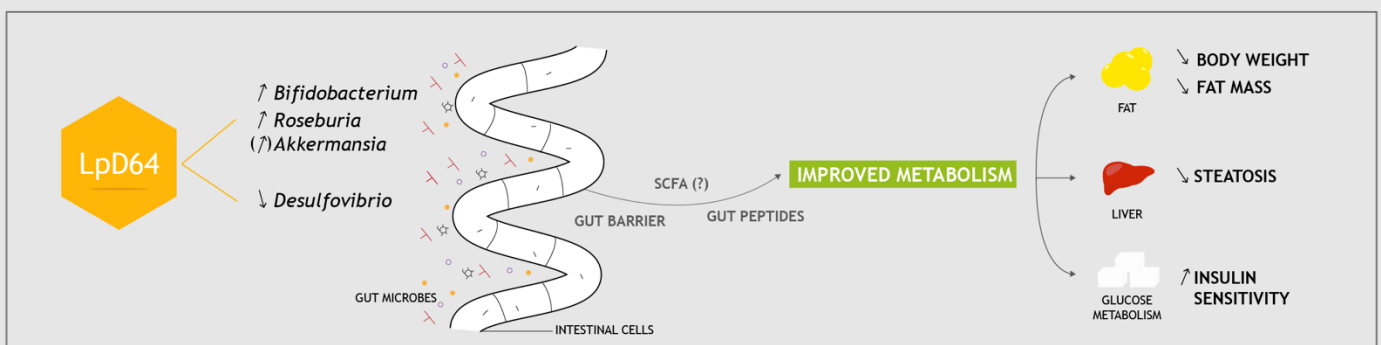
The results presented today in animals are from the microbiota analysis program carried out by VALBIOTIS in collaboration with Biofortis-Merieux Nutrisciences and Prof. Patrice CANI's team from the Université Catholique de Louvain. The study evaluated the effect of supplementation with LpD64 on the gut microbiota in murine models fed with a high-fat diet, compared with models subjected to a normal diet.

While the gut microbiota is strongly altered by a high-fat diet (HFD), its composition is significantly improved after supplementation with LpD64 and obtains results closer to those observed in the control models.

Specifically, supplementation with LpD64 increases the *Firmicutes* / *Bacteroidetes* ratio in feces, the decrease of which is linked to the development of obesity. It also significantly increases, in feces and cecal content, the abundance of several specific bacterial families targeted by scientific literature (*Bifidobacterium*, *Roseburia*) which are involved in intestinal permeability, strongly suspected to be a significant factor in the prevention of obesity<sup>3</sup>. Finally, it reduces the abundance of *Desulfovibrio*, a pathogenic microorganism.

Furthermore, these targeted effects on the gut microbiota are associated with an overall improvement in metabolism observed in the animals tested (Fig. 1).

**Fig.1. Modulation of gut microbiota using LpD64 and its potential effect on the metabolism**



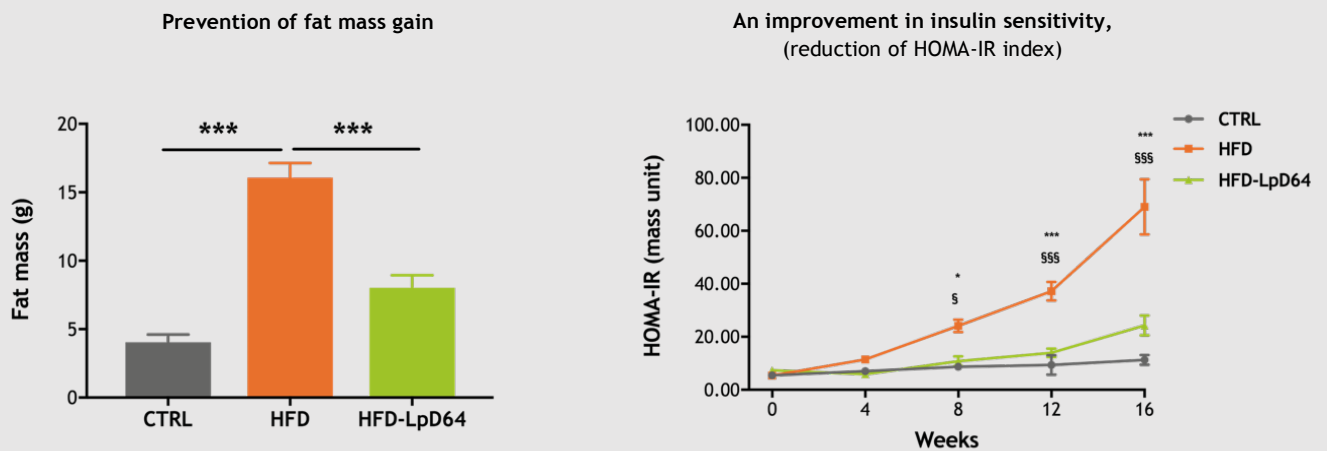
<sup>3</sup> CANI P. *et al.*, *Akkermansia muciniphila* inversely correlates with the onset of inflammation, altered adipose tissue metabolism and metabolic disorders during obesity in mice, *Nature*, 2015

Prof. Patrice CANI, partner of VALBIOTIS and an expert in gut microbiota, comments: *"LpD64 acts specifically on microbiota alterations which recent scientific literature has identified as influential in the prevention of obesity. This is a significant result from a scientific standpoint. Furthermore, these results on microbiota are combined with major effects on the metabolism, including a significant improvement in insulin sensitivity. The data are very promising, and should be confirmed in humans. LpD64 could be the precursor to a new generation of products"*.

## LpD64: prevention of the increase of fat mass, combined with improved insulin sensitivity

In the same murine models, the impact of LpD64 on the microbiota is accompanied with a significant effect on the metabolism: supplementation with the product produces results for fat mass gain and insulin sensitivity which are not statistically different to those from the control models that were not given a high-fat diet (Fig.2).

**Fig.2. Metabolic effects of supplementation with LpD64** in murine models subjected to a high fat diet (HFD) for 16 weeks, compared to control models (CTRL).



Consequently, in murine models subjected to a high-fat diet, supplementation with LpD64 modulates the microorganism populations involved in the development of obesity, prevents fat mass gain and demonstrates a distinctly positive effect on insulin sensitivity.

## ABOUT VALBIOTIS

VALBIOTIS specializes in developing innovative nutrition solutions designed to prevent cardiometabolic diseases and provide nutritional support for patients. Its products are made for manufacturers in the agri-food and pharmaceutical industries. VALBIOTIS particularly focuses on solutions to prevent type 2 diabetes, NASH (nonalcoholic steatohepatitis), obesity and cardiovascular diseases.

VALBIOTIS was founded in La Rochelle in early 2014 and has formed numerous partnerships with top academic centers in France and abroad, including the La Rochelle University, the CNRS and the Clermont Auvergne University located in Clermont-Ferrand, where the company opened a second office. These agreements enable it to benefit from a considerable leverage effect since it was set up thanks, in particular, to the experts and technical partners mobilized for these projects. VALBIOTIS is a member of the “BPI Excellence” network and received the “Innovative Company” status accorded by BPI France. VALBIOTIS has also been awarded “Young Innovative Company” status and has received major financial support from the European Union for its research programs by obtaining support from the European Regional Development Fund (ERDF).

Find out more about VALBIOTIS:

<http://VALBIOTIS.com/>

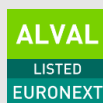


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