

Abstract Form

ABSTRACT

Author(s) & Affiliations

Karine Clément^{1,2}

¹NutriOmics team, UMRS 116, INSERM, Sorbonne University, Paris France

²Department of Nutrition, Pitié-Salpêtrière Hospital, AP/HP, Paris, France

Title of presentation

Modulating gut microbiota in cardiometabolic diseases; who for, what and when?

1. Brief description/abstract for the content of the presentation. **150 words maximum**

Introduction / Objectives / Methodology / Results / Conclusion

The contribution of human intestinal microbiota in the development of metabolic diseases (obesity, diabetes) and related complications (cardiovascular and liver diseases) has been highlighted by many publications. performed in rodent and humans. Studies have provided information regarding associations between gut microbiota composition, food intake, metabolic adaptations and inflammation using human dietary intervention and in the gastric bypass model. For example, decreased gut microbiota diversity is associated with increased fat mass, markers of insulin resistance and low grade inflammation. However, effective ways of modulating gut microbiota in clinical practice and whether they can be efficient in some, if not all, patients have yet to be identified.

2. Please give two to three key references which can be used to inform future work:

Aron-Wisniewsky J, Clément K. (2016) The gut microbiome, diet, and links to cardiometabolic and chronic disorders. *Nat Rev Nephrol.* 12:169-81.

Dao MC, Everard A, Aron-Wisniewsky J, et al. (2016) *Akkermansia muciniphila* and improved metabolic health during a dietary intervention in obesity: relationship with gut microbiome richness and ecology. *Gut* 65:426-36.

Cotillard A, Kennedy SP, Kong et al. (2013) Dietary intervention impact on gut microbial gene richness. *Nature.* 500:585-8.

3. Please identify up to three specific outcomes that dietitians and participants will take away to inform their future practice.

The contribution of gut microbiota and derived metabolites has been proposed in the development of obesity/ diabetes and related complications.

Higher level of some bacterial species e.g. *Akkermansia Muciniphila*, is associated with better metabolic profile such as decreased blood glucose, circulating insulin levels, improved insulin sensitivity and less inflammation.

However, whether new therapies modulating gut microbiota in obese/diabetic patients can be efficient in practice to improve their metabolic conditions and limit the occurrence of complications has yet to demonstrated.