

EFAD

The European Federation
of the Associations
of Dietitians

Free webinar on
Health through Gut

"THE ROLE OF DIET AND GUT MICROBIOTA IN HEALTH AND DISEASE"



Wednesday, May 4th
18:00 - 19:30 CEST

EFADTM The European Federation
of the Associations
of Dietitians

EFADTM
LEARNING

TABLE OF CONTENTS

02	Webinar agenda	06	Prof. Konstantinos Gerasimidis Presentation summary
03	Dr Siv Kjølsvrud Bøhn Bio	07	Prof. Amandine Everard Bio
04	Dr Siv Kjølsvrud Bøhn Presentation summary	08	Prof. Amandine Everard Presentation summary
05	Prof. Konstantinos Gerasimidis Bio		

"THE ROLE OF DIET AND GUT MICROBIOTA IN HEALTH AND DISEASE"

Webinar Agenda

EFAD

Opening Remarks 19:00 - 19:10

19:10 - 19:30

Introducing the gut microbiota – why do we have bacteria in our guts and why are they important for health?

Dr Siv Kjølrsrud Bøhn

Associate professor, Norwegian University of Life Sciences



The role of diet and in interaction with the gut microbiome in gastrointestinal disease

Prof. Konstantinos Gerasimidis

Professor of Clinical Nutrition, University of Glasgow

19:30 - 19:50

19:50 - 20:10

Gut microbes: a promising therapeutic target for obesity and type-2 diabetes?

Prof. Amandine Everard

Metabolism and Nutrition Research Group, Louvain Drug Research Institute, UCLouvain, Université catholique de Louvain, Brussels



Q&A

20:10 - 20:30

Bio

Dr Siv Kjølrsrud Bøhn

Associate professor, Norwegian University of Life Sciences

EFAD

Siv Kjølrsrud Bøhn (PhD) is an Associate professor at the Norwegian University of Life Sciences. Her current scientific focus is on improving health via impacting the gut microbiota. Bøhn participates in various clinical trials across different patient populations, mainly taking the responsibility of trial- design and implementation and outcomes ranging from the microbiota effects, and molecular biomarkers, to method validations and measures of fatigue and health-related quality of life. Bøhn has teaching and supervision expertise in nutrition, public health, cell biology, biotechnology, and immunology.

Bøhn has a solid background in molecular effects of diet interventions in different patient populations with hands-on experience in clinical trial design, trial implementation and biobanking, biomarker profiling of inflammation and gene expression analysis as well as statistics and bioinformatics.





Introducing the gut microbiota – why do we have bacteria in our guts and why are they important for health?

Dr Siv Kjølrsrud Bøhn

On all bodily surfaces that are exposed to the environment, we find a complex and diverse ecosystem of microorganisms (bacteria, viruses, fungi, and protozoa), collectively termed the microbiota. During the last decades, it has become clear that the microbes in the gut (‘the gut microbiota’), are serving many beneficial roles for our health and that disturbances in the gut microbiota are associated with the development of many different diseases. During evolution, we have adapted to co-exist with the microbes using efficient strategies to keep the microbes in check in the mucosal linings. At the same time, the microbes help us to digest ‘left-over’ food components that are otherwise indigestible to us. The products of bacterial metabolism in the gut not only provide energy but also serve other roles such as regulating the immune responses. However, we are only at the beginning of understanding how the gut microbiota and their metabolic products affect our health.

The lecture will introduce the microbiota and broadly explain why we have bacteria in our guts, what they are doing there, how we control them, how they are affected by the food that we eat and why disturbances in the microbiota may lead to diseases of various kinds.

Bio

Prof. Konstantinos Gerasimidis

Professor of Clinical Nutrition, University of Glasgow

EFAD

Professor Konstantinos Gerasimidis is a Professor of Clinical Nutrition.

He has graduated in Nutrition and Dietetics and completed his postgraduate studies in Clinical Nutrition. During his doctoral research at the University of Glasgow, he explored the effect of exclusive enteral nutrition on the gut microbiota and nutritional status of children with Crohn's disease; Professor Gerasimidis also leads a laboratory team which explores the role of gut microbiota and its interaction with diet in the onset, propagation, and management of acute and chronic conditions.

He has a strong interest in exploring the effect of habitual diet, elimination diets and artificial nutritional support on the gut microbiota of children and adults with inflammatory bowel disease.





The role of diet and in interaction with the gut microbiome in gastrointestinal disease

Prof. Konstantinos Gerasimidis

In the human gut resides a complex microbial community whose size is at least equal to that of the human body's eucaryotic cells, but with a functional capacity which outnumbers that of the host by a number of 100. Recent evidence suggests that this microbial community, often named the gut microbiome, is important not only for the onset of infectious disease but also for the development of non-communicable conditions, including conditions of the digestive tract. Diet is a major regulator of the human gut microbiome composition and function. However, the role of diet in the causal pathway between the gut microbiome and gastrointestinal disease can be complex. For example, in patients with coeliac disease, it is unclear if the gut microbiome plays a role in the underlying disease pathogenesis, or any changes observed are the effects of treatment with a gluten-free diet. Likewise, beneficial members of the gut microbiome, like Bifidobacteria, have been implicated in the aetiology of irritable bowel syndrome (IBS), but the treatment of active IBS symptoms with a low FODMAP diet further decreases the concentration of these species, and interventions with probiotics have had modest only effects. An exciting area of future research is whether we can use microbial signatures as prognostic markers of adverse disease outcomes in conditions, like an intestinal failure, and also if dietary manipulation of the gut microbiome can control disease activity outcomes in patients with Crohn's disease and ulcerative colitis.

Bio

Prof. Amandine Everard

Metabolism and Nutrition Research Group, Louvain Drug Research Institute,
Walloon Excellence in Life Sciences and BIOTEchnology (WELBIO),
UCLouvain, Université catholique de Louvain, Brussels, Belgium

EFAD The European Federation
of the Associations
of Dietitians

Amandine Everard is a researcher associate from the FNRS (Fonds National de la Recherche Scientifique) at UCLouvain in Brussels, Belgium. She is a professor and leading a research group studying the roles of gut microbes in the regulation of host metabolism and food intake at the Louvain Drug Research Institute.

She is the author of more than 50 research publications in that field and her work is internationally recognized as she is part of the Highly Cited Researcher over the world.





Gut microbes: a promising therapeutic target for obesity and type-2 diabetes?

Prof. Amandine Everard

The gut microbiota is a key player involved in health and diseases. Gut microbes have been identified as important regulators of host metabolism. Therefore, different tools targeting the gut microbiota such as probiotics, are studied to reduce obesity and metabolic disorders. Probiotics have a long history of use even if a clear definition only emerged at the end of the twentieth century. The more commonly exploited species are lactobacilli and bifidobacteria. Over these last years, other genus were also proposed as potential beneficial microbes and are referred to as next-generation beneficial bacteria candidates. Among the potential next-generation beneficial bacteria that are under investigation in the context of obesity, *Akkermansia muciniphila* seems to be a promising candidate. *Akkermansia muciniphila* is inversely associated with obesity, diabetes, cardiometabolic diseases and low-grade inflammation. We demonstrated that this bacterium was able to counteract diet-induced obesity and metabolic disorders in mice. Nowadays, a large body of evidence also demonstrates the causal beneficial effects of *Akkermansia muciniphila* in several preclinical models. In order to translate these preclinical data into human applications, we administered this bacterium to volunteers suffering from overweight and metabolic syndrome. This study demonstrates that pasteurized *Akkermansia muciniphila* was safe and well-tolerated in humans. Moreover, this first exploratory study reveals that Pasteurized *Akkermansia muciniphila* has also protective effects on the deleterious progression of the metabolic syndrome over time in humans. In conclusion, these results support the interest in targeting gut microbes to counteract metabolic disorders.

EFAD  **The European Federation**
of the Associations
of Dietitians

EFAD 
LEARNING