

**INTERNATIONAL SOCIETY OF MICROBIOTA**

**First ISM Symposium on  
MICROBIOTA & FOOD 2018**

**TOWARDS A NEW ERA IN  
AGRO-FOOD INDUSTRY**



**June 14, 2018 - Paris, France**

# First ISM Symposium on Microbiota & Food 2018

*Towards a New Era in Agro-Food Industry  
Food and Gut Microbiota Interaction: Implication for Human Health  
Microbiota & food industry: regulation & perspectives*

June 14, 2018 - Paris, France

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The International Society of Microbiota (ISM) organizes the **First ISM Symposium on Microbiota & Food**, which will be held in Paris in June 14, 2018.

Nowadays, the studies about microbiota are revolutionizing the clinical and health research. To fit with this extraordinary revolution, the agro-food industries have to prepare and initiate new ideas and new products for which the formulation will have a positive impact on human gut microbiota and by consequence on human health. **The aim of Microbiota & Food 2018** is to provide some ideas and strategies to help integrate an understanding of the industry perspective with the clinical and scientific perspectives to initiate these projects.

Microbiota & Food 2018 will be divided in different strategic parts:

- **Microbiota & food: recent advances & perspectives / Modifying the microbiota through food**
- **Microbiota, food industry and regulatory aspects**
- **Microbiota, food and formulation: presentation of the innovations**

In the first part of the Microbiota & Food 2018, we will discuss **the recent advances in microbiota and interaction with food**. We will highlight the **effects of microbiota metabolites after food ingestion** and the perspectives of their applications in humans. The toxicity aspects of food processing and exposure to various external component or unidentified contaminants and the impact on the microbiota after ingestion and exposure will be also discussed.

In the second part, the committee will highlight the strategic topic of the **regulatory aspects in the industry** and how these regulatory guidelines have impact on academic and clinical science. We will present the different regulatory categories of products (food for special medical purpose, food supplements, infant formula...) and the following strategic questions will be discussed:

- **How can industry, academic and clinical scientists work together to address regulatory challenges?**
- **Why is it important for scientists and clinicians to care about it?**

In the last part, we will **highlight the practical aspects and potential applications** in agro-food industry, infant formula, dairy products and all food formulations aimed to prevent and treat diseases. We will present the innovations related to microbiota applications in the different agro-food industries (probiotics, robotics, fermented food, functional ingredients...).

## Call for abstracts and innovations – 10 minutes to convince

The Scientific Committee invites all scientists, academics and industrials to present their latest advances on scientific research, formulation, functional ingredients, dietary supplements and clinical studies.

More time will be allocated to present the ingredients with probiotics and probiotics, and all finish products. If you have a specific strain, you can present your clinical data.

We hope that you will join us for this dynamic and strategic program and look forward to welcoming you in Paris.

**Prof. Peter Konturek** – President of the International Society of Microbiota

**Prof. Marvin Edeas** – Chairman of the Scientific Committee

# Microbiota & Food 2018 Speakers



## **Links between diet and specific functions of gut microbiota affecting host health**

*Marius Vital, Helmholtz Center for Infection Research, Germany*

It is becoming evident that both (1) deficiencies of health promoting features of gut microbiota such as the formation butyrate and (2) increased abundances of specific harmful functions (e.g. production of trimethylamine) are governing host health. Often a myriad of taxonomically diverse bacteria encode respective properties, sometimes at very low concentrations, hampering traditional phylogenetic-based diagnostics. I will present key ecological aspects of the two examples from above and highlight how diet is governing growth/activity of respective bacterial groups. Opportunities and challenges in function-based diagnostics and for precision treatment to maintain host health/reduce disease will be outlined.



## **Integrated analysis of food, microbiome and metabolome signatures that reduce gut inflammation across the lifespan**

*Elizabeth Ryan, Colorado State University, USA*

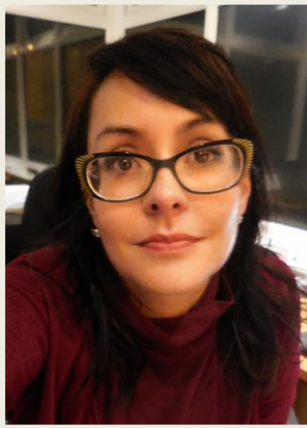
Emerging evidence supports health benefits in people consuming a diet rich in whole grains and legumes across the lifespan. This presentation will integrate research findings from human clinical trials completed in infants and adults at risk for chronic gut inflammation and will show the complex metabolic pathways and network interactions that occur between host and microbiome metabolism of probiotics and phytochemicals derived from rice bran and navy beans. These foods contain bioactive components that can be measured via metabolomics and reflect functional linkages between the gut microbiota, nutrient absorption, and the gut mucosal immune system. Our research findings have implications for dietary recommendations to control and prevent enteric dysfunction and colorectal cancer. This multi-platform research strategy and highly collaborative projects have translational applications to the broader fields of food function, microbiology, immunology, oncology, pediatrics and nutrition.



## **Health effects of fermented foods: recent scientific advances and perspectives**

*Benoit Foligné, Université de Lille, France*

It is increasingly understood that some fermented foods promote human health in ways not directly attributable to the starting food materials. The outcomes of fermentation, and the contributions of microbes, in particular, can provide additional properties beyond basic nutrition. The concept that live microbes associated with food fermentations can provide beneficial functions in the gastro-intestinal tract is consistent with the emerging view that core health benefits of probiotic cultures can be assigned to a species, rather than to specific strains of a species.



### **The gut microbiome: a link between nutrition, obesity and heart disease-**

**Ana Valdes**, *University of Nottingham, United Kingdom*

Individuals with higher circulating levels of omega-3 display higher gut microbiome diversity and, in general, a healthier gut. Importantly, higher microbiome diversity also correlates with lower long term weight loss and with important measures of cardiovascular disease risk. The anti-inflammatory contribution of omega-3 and other nutrients to lower CVD risk appears to in part be mediated by its effect in the gut microbiome, although gut microbiome diversity is not the only relevant parameter of interest, and several circulating metabolites generated by gut microbes play key roles in this process.



### **How food, the gut microbiota and its metabolites impact on bones**

**Mario Zaiss**, *Friedrich-Alexander-University Erlangen-Nürnberg (FAU), Germany*

Short chain fatty acids (SCFAs) are a main class of metabolites derived from fermentation of dietary fiber in the intestine. During Food & Microbiota 2018, we will present that dietary administration of SCFAs is associated with inhibition of osteoclast differentiation, increased bone mass, and reduced pathologic bone loss in mice.



### **Considerations when faced with choosing probiotics for clinical, research or commercial usage: navigating and understanding the options and implications-**

**Jessica Younes**, *Winclove Probiotics, The Netherlands*

Selecting probiotics for research, clinical or commercial use is a complex process. It presents a variety of choices and sometimes unclear consequences due to the variety of inherent probiotics properties and characteristics (single or multiple strains/species, the fact that they are living organisms, which strains to choose from, dosing and administration questions, safety concerns, etc.).

Simply put, how does one understand and integrate all of this information to come to an informed decision? This talk will walk through a number of these decisions in an attempt to provide a basic navigation framework for making informed choices about probiotics selection and use. While it is from the perspective of an industry scientist, only probiotics strains will be mentioned, not brands or specific products. It will also briefly touch on the implications of certain of these choices for research studies and patient outcomes.



### **Functional food for the skin and microbiota rejuvenation**

**Ivan Petyaev**, *Lycotec, United Kingdom*

With ageing the bioavailability and transportation of some essential micro-nutrients and vitamins is impaired. This leads to their deficiency in organs and tissues. In the skin this results in changes in its physiological parameters and control of its microbiota.

To address this issue a new range of functional food products has been developed. The results of the clinical validation of their successful ability to rejuvenate the skin and its microbiota will be presented during Microbiota & Food 2018.



### **The role of probiotics on the microbiota: effect on obesity**

**Ascensión Marcos**, *Institute of Science, Technology of Food and Nutrition, Spain*

The microbiota and the human host maintain a symbiotic association. Nowadays, metagenomic analyses are providing valuable knowledge on the diversity and functionality of the gut microbiota. However, with regard to the definition of a “healthy microbiota” and the characterization of the dysbiosis linked to obesity, there is still not a clear answer.



### **The gut microbiota metabolism of polyphenols and correlation with cardiometabolic risk biomarkers**

**Victoria Selma**, *CEBAS-CSIC, Spain*

Urolithins are metabolites produced by the gut microbiota after consumption of ellagitannin-containing foods such as pomegranates and walnuts. Ellagitannin-metabolizing phenotypes (urolithin metabolites A, B and O; respectively) can vary among individuals depending on their gut microbiota composition and indirectly depending on their overweight and obesity grade, and general health conditions. However, correlations between urolithin metabolites and cardiometabolic risk (CMR) factors are unexplored. We investigated the association between urolithin metabolites and CMR factors in individuals with different body mass index and health status. Correlations between CMR factors and urolithins were found in overweight-obese individuals. Urolithin metabolites are potential CMR biomarkers. Overweight-obese individuals with urolithin metabolite B are at increased risk of cardiometabolic disease, whereas urolithin metabolite A and urolithin-A production could protect against CMR factors.



### **Maternal diet and impact on maternal-infant microbial transference: what is the role of breastfeeding on infant gut microbiota development and immune system maturation?**

**Maria Carmen Collado**  
*Instituto de Agroquímica y Tecnología de Alimentos, Spain*

Breast milk constitutes one of the most important sources of postnatal microbes. However, the influence of perinatal factors on the milk microbiome is still poorly understood. During this meeting, we will highlight that the mode of delivery has an important impact on milk microbiome composition.



### **Microbiota and food regulatory aspects: the current situation, trends and perspective**

**Stoffer Loman**, *NutriClaim, The Netherlands*

- The current regulatory status of foods targeting the microbiome : An overview
- How to establish a microbiome related public health messages and dietary recommendations?
- What is the status of probiotics in food (Living or dead species)?
- What kind of claims we are allowed to use?
- What are the regulatory requirements for novel foods targeting the microbiome?

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## Preliminary Agenda

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8h00 Welcoming & Registration of Attendees

### Session 1: Microbiota & food 2018: recent advances & perspectives

#### Modifying the microbiota through food

9h00 – 13h00

9h00 General introduction on gut microbiota: Towards a new area in human health  
Microbiota & Food 2018 Challenge: Targeting microbiota metabolites  
*Introduction by the chairpersons of the Scientific Committee*

9h25 The role of probiotics on the microbiota: effect on obesity  
*Ascensión Marcos, Institute of Science, Technology of Food and Nutrition, Spain*

9h50 Integrated analysis of food, microbiome and metabolome signatures that reduce gut inflammation across the lifespan  
*Elizabeth Ryan, Colorado State University, USA*

10h15 Links between diet and specific functions of gut microbiota affecting host health  
*Marius Vital, Helmholtz Center for Infection Research, Germany*

10h40 Coffee Break

11h10 The gut microbiome: a link between nutrition, obesity and heart disease-  
*Ana Valdes, University of Nottingham, United Kingdom*

#### Microbiota & Food: Targeting the bones

11h35 How food, the gut microbiota and its metabolites impact on bones  
*Mario Zaiss, Friedrich-Alexander-University Erlangen-Nürnberg (FAU), Germany*

#### Mother food, breast feeding and infant gut

12h00 Maternal diet and impact on maternal-infant microbial transference: what is the role of breastfeeding on infant gut microbiota development and immune system maturation?  
*Maria Carmen Collado, Instituto de Agroquímica y Tecnología de Alimentos, Spain*

12h25 Lunch Break

## Session 2: Microbiota & food industry: innovations, regulation & perspectives

14h00 -18h00

### Microbiota & food formulation

- 14h00 **Considerations when faced with choosing probiotics for clinical, research or commercial usage: navigating and understanding the options and implications-**  
*Jessica Younes, Winclove Probiotics, The Netherlands*

### Microbiota & regulation

- 14h25 **Microbiota and food regulatory aspects: the current situation, trends and perspective.**  
*Stoffer Loman, NutriClaim, The Netherlands*

### Microbiota & fermented food

- 14h50 **Health effects of fermented foods: recent scientific advances and perspectives**  
*Benoit Foligné, Université de Lille, France*

### Microbiota & innovations

- 15h15 **The gut microbiota metabolism of polyphenols and correlation with cardiometabolic risk biomarkers**  
*Victoria Selma, CEBAS-CSIC, Spain*

### 15h40 Coffee Break

- 16h10 **Functional food for the skin and microbiota rejuvenation**  
*Ivan Petyaev, Lycotec, United Kingdom*

- 16h35 **10 minutes to convince**

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#### **Improve gut microbiota with optimal fiber cocktail**

*Kätrin Karu, Center of Food and Fermentation Technologies, Estonia*

#### **Metabolism of cyanidin 3-O-glucoside by human intestinal bacteria**

*Zuzana Matuskova, University Palacky Olomouc, Czech Republic*

#### **The impact of deep freezing of lactic acid bacteria cultures on their antifungal properties**

*Reda Riesute, Kaunas University of Technology, Lithuania*

#### **Microbiome and diet in scalp disease: the example of alopecia areata**

*Daniela Pinto, Giuliani S.p.A., Italy*

**18h00 Round table discussion with speakers**

*Formulation with probiotics/prebiotics or formulation with metabolites?*

*Microbiota or Metabolites: the subtle balance*

*Can we modulate the variability and diversity of human microbiota by food?*

*What kind of clinical studies do we need to undertake and demonstrate the effects and/or impact?*

*How to select new generations of bacterial strains with beneficial effects on health?*

*Microbiota, food & toxicity: How does the process/packaging affect food and what is the impact on microbiota?*

*What unknown (unwanted) compounds or contaminants can be found in food and the bioremedial role of our microbiota?*

**Microbiota & Food Scientific Award**

**B to B networking session**

*You are academic or start-up and you have an innovation concerning the food and microbiota world to present?*

*You are industrial and you are looking for a new academic collaboration to develop innovation?*

*The ISM will allocate you time to exchange and create collaborations. For more information, please contact us.*

**18h30 End of Microbiota & Food 2018**



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## Practical Information

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### Conference Venue

The symposium will be held in the heart of Paris, near Opera Garnier. The exact venue will be communicated soon.

### Registration

	Until April 16	From April 17
Academics	495 €	695 €
Industrials	995 €	1 195€

To register, please use the online registration form on [www.microbiota-site.com](http://www.microbiota-site.com) or [by clicking here](#).

#### Special Discount for ISM Members

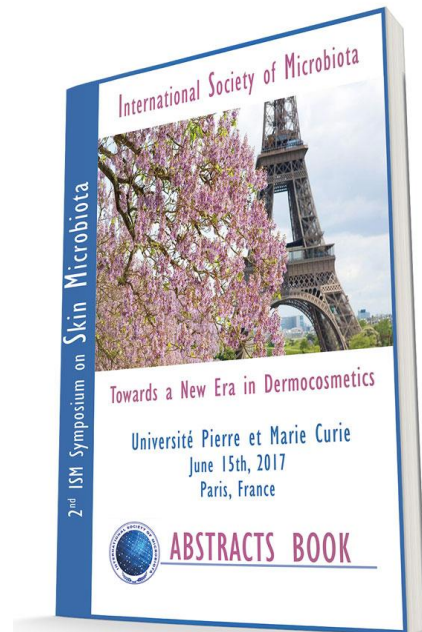
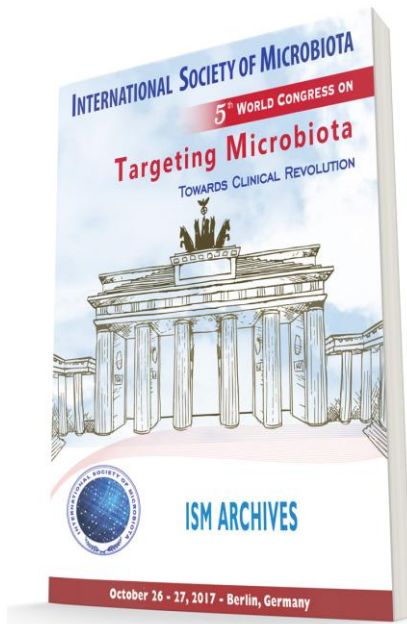
As member of ISM, you can have a discount of **250€** on your registration fees by using the promotional code you received by email. Please take on consideration that this code is available **only for members** already confirmed. For further information, please contact us.

### To whom is addressed this symposium?

This symposium is aimed for academic and industrial researchers as well as all communication and marketing managers who wish to know the latest scientific research and trends in the microbiota and agro-food industry.

## Abstracts Books

Each participant will receive a detailed abstract on each session and a summary and/or power point presentations of different interventions. If you cannot participate in the symposium, you may order the abstracts book by clicking here. You can also order the abstracts books of the previous editions.



## Accreditation

*(only for French attendees)*

Ce symposium s'inscrit dans le cadre de la formation continue organisée par Takayama pour l'International Society of Microbiota et vous permettent de bénéficier de votre Droit Individuel à la Formation. Numéro de formation continue: 11 75 53593 75

## Contacts

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