Today, over 60% of functional food products focus on improving digestive health, with probiotics and prebiotics probably being the most common worldwide. Probiotics and prebiotics target the host through the gut by distinct as well as complementary mechanisms of actions.

**PROBIOTICS**

A probiotic is a food ingredient selectively stimulating growth of microbial species in the gut microbiota that confers health benefits to the host. Some probiotics occur naturally in foods such as chicory, cereals, agar and milk; however, most foods contain only trace levels. ILSI Europe is at the forefront to further develop the concept of probiotic effects. Mechanisms of Probiotic Action There is a general consensus in the probiotic scientific community that specific probiotic strains have documented health benefits. However, their mechanisms of action often remain unclear. ILSI Europe is investigating the current knowledge about the mechanisms of probiotics action in relation to demonstrated (clinical) benefits.

**PREBIOTICS**

A prebiotic is a food ingredient selectively stimulating growth of microbial species in the gut microbiota that confers health benefits to the host. Prebiotic compounds show a wide variability in terms of structure and effects on the gut ecology (microbiota composition and activity) and so consequently of beneficial effects on the host. ILSI Europe’s experts aim to identify the specific characteristics of the prebiotic structure that have effects on the gut ecology. The activity will produce recommendations on how to better characterise prebiotics with respect to specific physiological effects. Structure-Function Relationship for Prebiotic Compounds Prebiotic compounds show a wide variability in terms of structure and effects on the gut ecology (microbiota composition and activity) and so consequently of beneficial effects on the host. ILSI Europe’s

**ORAL & GUT MICROBIOTA**

Not only the gastrointestinal microbiota seems to play a major role in quality of life. There is also increasing evidence of a link between oral microbiota and systemic health. ILSI Europe is investigating the impact of oral and gut microbiota on health.

**Microbiome Human Study Research Guidance**

The microbiome research field currently experiences issues with study repetitability, comparable outcomes and microbiome results across studies due to variations in study design and methods applied to characterise the microbiome and confounders such as diet and geography. The activity will identify specific confounding factors that should be considered in relation to microbiome-related outcomes and propose ways to optimise study design and methodologies to achieve physiologically meaningful results.

Status: Three manuscripts in preparation

**Oral & Systemic Health Resilience**

Oral health has been acknowledged to have an impact on overall quality of life and may be related to systemic health. The links between oral and systemic health are currently being explored, and ILSI Europe is taking the lead in pursuing this cutting-edge research. This activity will create the scientific evidence base for subsequent clinical confirmation of health claims both on oral and systemic health.

Status: Manuscript in preparation

**Short Chain Fatty Acids (SCFAs)for Health**

SCFA production from prebiotic consumption is considered as a part of the microbiota by which probiotics exert beneficial effects on gut health and metabolic function. SCFAs also exert positive local and systemic physiological effects. It is intended to evaluate whether SCFAs can be considered as a health benefit or markers by providing scientific evidence of their beneficial actions.

Status: Manuscript in preparation

**NUTRITION SECURITY & SOCIETAL ASPECTS**

Food choice is a dietary behaviour influenced by many different determinants, like hunger, appetite, taste, cost of food, education level, culture, mood, stress and attitudes, beliefs and knowledge about food.

**Consumer science**

Consumer science, societal aspects and sustainability are ever-expanding fields. If we do not know enough about consumer behaviour, risk perception and the drivers influencing consumer preferences, then we cannot learn how to effectively encourage consumers to choose healthier diets and more sustainable practices. Societal aspects and sustainability are linked together with consumer science as it is becoming more and more important to provide enough, healthy and safe food to a growing population. Consumer preferences are also determined by environmental and societal aspects. Therefore, all these topics have to be considered through a more holistic approach.

**Nudging Consumers Towards Healthier Food Choices**

Unhealthy food choices and related behaviours are currently driving increased rates of obesity in Europe, with concomitant increases in the incidence of non-communicable diseases. Several strategies are used to move consumers towards healthier choices. One among them is nudging, a concept promoting the idea that positive reinforcement and indirect suggestion will influence the decision making of groups and individuals in a more sustainable way than other interventions.

The proposed activity aims to systematically review the existing evidence base regarding short and long term impacts of nudging, and to identify gaps in knowledge where these exist. Suggestions for further research will be made where appropriate. Ultimately, this project will lead to a greater understanding about the potential role of the psychological and cultural determinants of food choice in the context of nudging theory.

Status: Manuscript in preparation

**EU Project SUSFANS**

Strengthening food and nutrition security in the European Union is a key objective of the Horizon 2020 programme. Proactive and foresight projects like SUSFANS are linked to the Horizon 2020 agenda, which aims to strengthen and unite the European research community. The project offers stakeholders a new and exciting opportunity to participate in investigating the impact of policies on consumer choice and subsequent implications for nutrition and public health in the European Union

The 1st Stakeholder Core Group (SCG) Workshop was held in October 2016, in Prague, Czech Republic, the 2nd SCG Workshop was held in October 2016, in Brussels, Belgium, and the 3rd SCG Workshop was held in September 2017 in Vienna, Austria.

Status: Completed

**EU Project FIT4FOOD2030**

To support the European Commission in the development and implementation of the FOD2030 strategy framework and its action plan, FIT4FOOD2030 aims to establish a sustainable multi-stakeholder, multi-level platform, mobilising a wide variety of stakeholders at the level of cities, regions, countries, and Europe. Further, the role of research and innovation in the development and implementation of the strategy in sustainable food systems will be assessed. ILSI Europe supports the project in investigating trends, barriers and showcases in the EU innovation sphere, in disseminating the project work and in building the FOOD2030 Platform.

Status: Ongoing