

Session I Lecture 3

Unlocking the Role of the Gut Microbiome for Human Health

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Summary

Microbiomes are key to solving many of the societal challenges we face, ranging from sustainable agriculture and biobased production, global greenhouse gas emissions, to individual-based health issues related to microbiomes inhabiting our body. In this presentation, a number of cases will be discussed from prospective cohort and dietary intervention studies, linking particular microbiome signatures to intestinal and systemic health at different life stages. Furthermore, examples will be given from studies with defined microbial consortia representative of human intestinal microbiomes. Such defined microbiomes provide a pragmatic approach to investigate the functional roles and inter-species interactions among gut microorganisms. Such knowledge is crucial to gain mechanistic understanding of the roles the human intestinal microbiome plays in health and disease. Finally, the importance of large scale, open access research infrastructures in our endeavor to empower microbiomes for human and planetary health will be discussed.