



Het Vlaams darmfloraproject

Vlaams Instituut voor Biotechnologie

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Samenvatting van de presentatie: Alterations in the gut microbiota have been linked to various pathologies, ranging from inflammatory bowel disease and diabetes to cancer. Although large numbers of clinical studies aiming at microbiome-based disease markers are currently being performed, our basic knowledge about the normal variability of the human intestinal microbiota and the factors that determine this still remain limited. Here, I will present a large-scale study of the gut microbiome variation in a geographically confined region (Flanders, Belgium). A cohort of >5000 individuals from the normal population is sampled for microbiome analysis and extensive metadata covering demographic, health- and lifestyle-related parameters is collected. Based on this cohort, a large-scale cross-sectional study of microbiome variability in relation to health as well as parameters associated to microbiome composition is being performed. In this presentation, I will discuss our experiences in large-scale microbiome monitoring, show how the development of dedicated computational approaches can assist in microbiome analysis and interpretation, and first results coming out of this effort.

Prof. Jeroen Raes is associate professor at KU Leuven since 2013 and VIB group leader since 2009. His group currently consists of 16 scientists, with expertise in bioinformatics, systems biology, clinical research and microbiology. He has a substantial track record in microbiome research and has been pioneering the analysis and integration of meta-omics datasets (metagenomics, metatranscriptomics, metaproteomics, meta-metabolomics) with environmental, clinical, host omics and dietary data. He was involved in the FP7 MetaHIT and NIH Human Microbiome Project (the latter as only European partner), which laid the foundations for the human microbiome field as it is today. Finally, his lab is performing a wide range of disease-related projects in a.o. IDB, diabetes, cancer, IBS and antibiotics resistance on national (FWO/IWT) funding and develops novel approaches and tools for microbiome research. He coordinates the Flemish Gut Flora project, a large scale microbiome-focused population cohort in Belgium, and is bioinformatics coordinator in the Tara Oceans project performing large-scale meta-omics analysis of plankton communities.

AOAC Lowlands

*Symposium Darmgezondheid: Gezondheid zit in de darmen
21 september 2017; Breda; Nederland*

