

Using the Microbiome in Health and Disease: Perspectives and Challenges

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Human health depends on a balance between three main components: Host Physiology and Psychology, Environmental Factors and Microbiome Ecosystem. From Pasteurian microbiology to the metagenomics revolution, the tremendous increase of scientific papers published on microbiome each year demonstrates that this field is one of the most promising of this century and offers us additional opportunities to advance in nutrition and medicine.

Gut microbiome dysbiosis not only impact our Gut Intestinal (GI) metabolism but is also involved in numerous diseases in particular chronic illnesses, such as diabetes, IBD, cancer or neurologic diseases. In some conventional cancer therapy, new microbiome-adjuvant treatment could be prescribed. Next-generation probiotics candidates are known to be able to boost the response to immunotherapy treatment.

Microbiome variations do not merely occur among individuals but can be temporal, special, health state and other intra-individual factor dependent. Today, the idea is to develop customized treatment strategies with microbiome intervention. With a personalised diet, precision prebiotics, probiotics or synbiotics tailored to individual patient characteristics, the goal is to re-equilibrate the microbiome.

We face different challenges to improve our understanding of this complex ecosystem and to launch the novel microbial therapeutics or microbiome based- products.

Biography:

Francoise is Chief Scientific Officer one of the founder of Biofortis Merieux NutriSciences. Francoise firstly obtained a Cellular and Molecular Biology Master from the University of Rennes, and then has been graduated from the Faculty of Sciences of Nantes in France. After different missions at Cochin Hospital and Pasteur Institute in Paris, Research Centre in Nantes, Johns Hopkins Hospital and the NIH in the US, she held research and development manager positions over the last 20 years. As Microbiome Research Program Leader, Francoise has set up a platform for the study of bacterial ecosystems for clinical and pre-clinical applications in nutrition, health and wellness. National Award : 2011 : Knight of the Order of Merit for contribution in Science.