

International Conference on **PROBIOTICS AND PREBIOTICS**  
&  
2<sup>nd</sup> Annual Conference on  
**MICROBES AND BENEFICIAL MICROBES**

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## ***Elias Hakalehto***

*Finnoflag Oy and University of Helsinki, Finland*

### **Probiotics in mitigating and eliminating the root causes of illnesses**

The definition of any microbiological disease usually corresponds to specific causative agents and symptoms. However, various statuses of the patient microbiome, associated with human health or disease, or various conditions in between, have been recently identified. In our laboratory, the microbiological stool samples have been screened against the patient sera in order to understand microbial attachment, penetration and intrusion into the body system. These immunogenic traits together with information on the overall composition of the host microflora, help in the diagnosis of specific diseases and in evaluating the risks for their onset. In some cases, beneficial microbial composition has been able to prevent serious diseases, such as cancer or stroke. Imbalance of the microbiome may provoke e.g. lower back problems, headache and fatigue. In numerous countries more than ten percent of the population suffers from the IBS (Irritable Bowel Syndrome). Inflammatory gut diseases make a huge toll by lost working days, stress-related illnesses etc. Some pathogenic conditions by e.g. *Bacillus*, *Salmonella*, *Listeria* strains and *Staphylococci* or *Streptococci* could be demonstrated by studying the intestinal isolates. Sometimes these strains cause hazardous infections elsewhere in the body system. To quantify the probiotic effect and for characterizing the balance, we have introduced the concept of BIB (Bacteriological Intestinal Balance). It can be determined by the Portable Microbe Enrichment Unit (PMEU). This balance could be influenced by pre- and probiotic treatments, which mitigate the syndromes and in the best cases eradicate the root causes of various illnesses.

### **Biography**

Elias Hakalehto, PhD, is a Microbiologist and Biotechnologist serving as the Adjunct Professor of the microbiological agroecology in the University of Helsinki, as well as the Adjunct Professor in the University of Eastern Finland for biotechnical microbe analytics. He is the CEO of Finnoflag Oy, established in 1993. He has conducted more than 100 R&D projects for different industries. He is also the Vice President of the International Society of Environmental Indicators, whose 22<sup>nd</sup> global conference he chaired in summer 2017. He has edited a book series on Microbiological Hygiene and authored about one hundred book chapters, besides numerous scientific papers and patents.

[elias.hakalehto@gmail.com](mailto:elias.hakalehto@gmail.com)

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