

All you want to know about

THE MICROBIOTA

The **human microbiota** is defined as all the living members that inhabit the human body, considering bacteria, archaea, fungi and others, who play a key role in human health. There are different human microbiotas base on the body site, with oral, skin, intestinal and vaginal microbiota being the predominant ones.



INTESTINAL MICROBIOTA

The gut microbiota develops essential functions in the human gut modulating the immune system, conferring protection against pathogens, and producing essential compounds such as amino acids, vitamins and neurotransmitters.



COMPOSITION

The gut microbiota composition evolves over time and changes due to extrinsic factors like the diet and antibiotics, and due to intrinsic factors like genetics and ageing.

The microbiota is established during birth event evolving to a mature microbiota up to 3 years old. The most predominant bacterial phyla in the gut microbiota of adults are Firmicutes and Bacteroidetes.



ALTERATIONS AND DISEASE

The microbiota alterations (dysbiosis) and the subsequent microbial metabolite profiling perturbations, such as changes in short chain fatty acids, have been related to different health status.

Up to date, more than 100 diseases have been related with microbiota dysbiosis although there is no causality established. However, modulating the microbiota to reshape the alterations towards a healthier or standard microbiota profile, will enable to impact human metabolism and physiological process improving the patient's life quality.

APPLICATIONS

Probiotics, define as "live microorganisms that, when administered in adequate amounts, confer a health benefit on the host" has been used as food supplements for intestinal health, constipation and several disorders like anxiety. Up to date, most of the commercially available probiotics are single or multi-strain products based on **Lactobacillus** and/or **Bifidobacterium**.

However, the development of personalized products with specific applications on a targeted population relies on the use of next generation probiotics based on novel selected species that provides key solutions for human health.

MICROVIABLE FOCUS

Microviable Therapeutics is developing a novel class of biological products based on defined bacterial consortia (Live biotherapeutic products, LBPs) with therapeutic applications in neurological and skin disorders. In parallel, Microviable is working on next generation probiotics personalized for specific targeted population, currently focused on sports performance and healthy ageing.

