

## Probiotics: Exploring new horizons beyond imagination

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There has been a lot of research about the human microbes, some detailed investigations of the gastrointestinal microorganisms and its functions and the highlighting of complex interactions between the gut, the gut micro biome and the central nervous system. That acquires the involvement of the micro biome in the pathogenesis of various diseases. The gut micro biota is sensitive to internal and environmental influences, we have speculated that among the factors that influence the formation and composition of gut micro biota during life. Micro biome in human system is unequally distributed in the body and includes the aggregate of all microorganisms. The most abundant micro biome in our body is gastrointestinal track. Which contain number of species of different microorganisms, among them (adults) Bacteroidetes, Actinobacteria and Firmicutes are dominate. The gastrointestinal micro biota is well studied than other human bacterial communities. There are studies have shown that how exactly the intestinal micro biota has an impact on the health of its host.

Human gastrointestinal tract showed biggest associations of host, environments and antigens. During the average human lifetime, tons of food transfer through the gut with complex of microorganisms from the ambient environment which poses threat on the intestinal entirety. Gut micro biome play a pivotal role in keeping up the resistance and the metabolic homeostasis effective and are protect against pathogenic microbes. Gut micro biota is a crucial modulator of brain development and subsequent adult behavior, and pathogenic microbes can be a reason of inflammatory diseases of the central nervous system. Epidemiological research has been shown a link between microbial infections early in life and neurological disorders, including autism and schizophrenia. The gut microbes can change the immune response by activating the immune system or through mediators that are able to penetrate the blood-brain barrier (BBB) or through other chemicals-related substances that have free access to the brain.

The Probiotics microbes offers numerous bonuses to the host due to physiological capacities such as harvesting energy, strengthening gut integrity or shaping the intestinal epithelium protecting against pathogens and modulating host immune system. Research showed that, Microorganisms which live inside our gut are beneficial for the proper development of the central nervous system for brain response and the regulation of host physiology, the ecosystem in the human gut is divers, there is potential for these processes to be disordered because of a changed microbial composition, which can be improved by daily up take of probiotic

### Biography

Prakash S Bisen is currently pursuing his research in the field of medical biotechnology as Honorary Professor with a research project on tuberculosis from Grand Challenges Canada, Govt. of Canada in the Centre of Innovative Technology, Vikrant Institute of Technology and Management, Gwalior and School of Biotechnology, Jiwaji University, Gwalior. He has been elected fellow of the National Academy of Sciences, India for his enormous contributions to the field of General Biology.