**The recent innovation on probiotic based functional foods :**

**Challenges and opportunities**

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**ABSTRACT**

 Probiotics are live microorganisms which, when administrated in adequate amounts, confer a health benefit on the host. The latest discoveries on gut microbiota open doors to the new mechanisms of immunity, intestinal permeability, insulin sensitivity and weight management. Moreover, health beneficial effects of probiotics include prevention and treatment of obesity, reduce colon cancer, oral health such as bad breath and tooth decay, skin care such as anti-aging and bio-moisturizer, manage psychological stress and the gut/brain relation. Nowadays, probiotic food products become increasingly popular and their market is growing worldwide. The most common commercially available probiotic products are fermented dairy products like buttermilk, yoghurt and sour cream. Recent technological developments such as microencapsulation, along with high productivity procedures are helping the scientific community to create novel probiotic products, have made it possible to incorporate and deliver probiotics using non-dairy based food products. New probiotic products in the market as well as novel concepts in the research publications are expanding rapidly. Fermented soy, fermented beverages, brewed coffee, tea and latte, energy drink, young coconut water, brown rice/cereal, frozen pizza are some of new probiotic based products. Above all, it is company’s responsibility to provide scientific based evidence on health benefit with no misleading perception to consumers and to meet the existing government regulations to achieve sustainable production.

Keywords : probiotic based functional foods, challenges, opportunities, regulations