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## Probiotics as an Adjuvant Therapy in Management of Celiac Disease

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Celiac disease (CD) is an autoimmune disorder induced by the ingestion of gluten in genetically susceptible individuals who carry the HLA-DQ2 or DQ-8 alleles. This disorder affects the small bowel and often leads to villous atrophy, malabsorption, and malignancy. In addition, evidences have indicated that enhanced intestinal permeability is one of the factors involved in the development of various autoimmune disorders as well as CD. It has been proposed that some unfavorable bacteria may colonize the intestinal mucosa. Presently, adhesion to gluten-free diet is the only effective treatment for the patients and several researches have indicated the improvement and amelioration of the symptoms. However, exclusion of gluten from diet have some constrains for the patients and usually transgressions occur due to the inaccessibility of gluten-free products in many parts of the world and high price of such products, decrease the quality of life and social pressure. Based on these reasons, alternative therapies including genetically modified gluten, zonulin inhibitors, therapeutic vaccines, tissue transglutaminase inhibitors, and, recently, probiotics have been proposed. In recent years, probiotics have been assumed to have beneficial effects on CD management. The beneficial effects of probiotics on the gut health of the host can be revealed through production of inhibitory substances, blockage of adhesion sites, regulation of immunity, detoxification of toxin receptors and competition for nutrients. In CD, the mechanisms of action of probiotics are based on the regulation of microflora composition, influencing the immune system by modulating the innate immune response both to anti-inflammatory and pro-inflammatory directions. Besides, it has been found that some probiotic strains have hydrolyzing enzymes. In this context, further studies exploring the efficient bacterial species could expand our knowledge about the exact mechanisms involved and assist to design effective therapeutic approaches of CD.

### **Biography:**

Dr. Sohrabvandi (assistant professor of Shahid Beheshti University of Medical Sciences) was born in 1978 in Iran. She was graduated (MSc and PhD of Food Technology) from University of Tehran (Iran). Her professions are beer, functional food and probiotic technology. She has published 6 books and more than 80 research articles. She has many national and university research awards and honors and is consultant of some governmental organizations regarding standardization, regulation and surveillance.