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Advances in the Use of Beneficial Microorganisms to Improve Nutritional and Functional Properties of Fermented Foods

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Health organizations have recently highlighted the need to improve the nutritional and functional characteristics of foods and beverages as a strategy to prevent chronic disease and enhance, globally, the life quality. Many staple foods are characterized by critical issues such as high glycemic response, low biological value of proteins, high concentrations of salt and fat, the presence of ingredients associated with hypersensitivity reactions, often lacking functional compounds such as fibers and polyphenols. The use of fermentation and selected starters, such as lactic acid bacteria (LAB) and yeasts, has long been considered an excellent tool to improve the nutritional/functional characteristics of foods by the synthesis of bioactive compounds, or by the degradation of antinutritional factors, while ameliorating their organoleptic and technological features. In recent years, natural fermented foods, novel food matrices and their microbial communities have been studied in order to select microorganisms with characteristics useful for the nutritional/functional improvement of traditional and novel fermented foods. In this Special Issue, an overview of the latest scientific evidences on the improvement of nutritional and functional properties resulting from the use of beneficial microorganisms, is provided.

