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Abstract

# FUNCTIONAL FOODS: AN INNOVATIVE PROGRESSSION FOR BIOINDUSTRIES

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**Abstract:**

Healthy food choices are always a good investment. Food is the most primitive form of comfort and is a common ground, a common experience for every individual. Since the last two centuries, significant changes in the world's food system have occurred and renewed interest in the functional foods have been observed in the world; largely driven by their health benefits.

Functional foods are foods that offer extra health benefits beyond their nutritional value and obtained through a technological intervention that increases its level of biologically active compounds. Biologically active compounds are components of foods that act positively on key body functions that are relevant to health. These may include certain conventional and modified food such as grains, fruits, vegetables, nuts and modified foods such as yogurt, kefir, cereals, beverages and many other fermented foods. These are prepared by manipulating the formulations or by traditional means to provide the desired function. The functional foods are rich source of carotenoids, flavonoids, phenolic acids, alkaloids, saponins, polysaccharides, antioxidants, minerals, vitamins, fatty acids, dietary fibers etc. Functional foods imparts numerous health benefits such as reduction of cancer risk, improvement of heart health, enhancement of immune functions, improvement of gastrointestinal health, anti-inflammatory effects, reduction of blood pressure, antibacterial and antiviral activities, reduction of osteoporosis etc.

In fermented food, microorganisms associated with functional foods are responsible for the fermentation of the raw substrate and their bioconversion to easily digestible products enriched with bioactive compounds with enhanced nutritive properties, shelf life, taste, flavour, aroma, texture and health benefits. A major development in functional foods also pertains to foods containing probiotics and prebiotics which impart immense health benefits to human immune system. Amongst them, Lactic acid bacteria being recognized as industrially important probiotic organisms known for their fermentative ability as well as their health and nutritional benefits with immense scope for food industries. Functional foods with probiotics are establishing worldwide at rapid scale and these have become extremely popular among consumers recently. Therefore, health foods containing probiotics/synbiotics constitute current and future waves in the evolution of the food development cycle. A functional food, therefore, provides a means to reduce the increasing cost on health care system by a continuous preventive mechanism and is emerging as one of the fast growing sectors of global food industry.

**Biography:**

Nivedita Sharma was born on June 9, 1964 in Mandi, India. Daughter of Somesh Chand and Chanderkanta Sharma. Currently she works as a Professor at the Department of Basic Sciences, Dr. Yashwant Singh Parmar University of Horticulture and Forestry. Nivedita Sharma does research in Molecular Biology, Biotechnology and Microbiology. Her current interests are in Biofuels, Enzymes , Probiotics and functional foods.She has been listed as a noteworthy microbiologist, researcher, educator by Marquis Who's Who. Her bachelor of Science, H.P. University Shimla, India in 1983, Master of Science, H.P. University Shimla, India in 1985, Master of Philosophy in Microbiology, H.P. University Shimla, India in1987 and Doctor of Philosophy in Microbiology, H.P. University Shimla, India in 1991.Her avocations are reading, listening to music, gardening, traveling, nature.She was a member of Association Microbiology India, GBF Club.

**Publication of speakers:**

1. Sharma, Nivedita & Bansal, Kishori & Neopaney, Bhanu. (2018). Enhanced biodegradation of forest waste under solid state fermentation by using a new modified technique.
2. Sharma, Nivedita & A, Sood. (2018). Biodegradation of agricultural residue by Bacillus sp. Strain CBS28 and CBS11 isolated from soil.
3. Sharma, Nivedita & Bhalla, Tek. (2018). Bacteria from forest litter.
4. Sharma, Nivedita & Joshi, Vinod. (2018). Spoilage of fruits, vegetables and their processed products.
5. Sharma, Nivedita. (2018). Industrial Ethanol Production In: Biotechnology Food Fermentation.

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