УДК 328

## DEVELOPMENT OF FUNCTIONAL FOODS FOR NUTRITION & HEALTH

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Functional foods are modified foods that can be considered to be those whole, fortified, enriched or enhanced foods that provide health benefits beyond the provision of essential nutrients (e.g., vitamins and minerals), when they are consumed at efficacious levels. Functional foods can be from plant sources or animal sources. A functional food is generally a food (not a capsule, tablet, or powder) derived from natural ingredients which can be consumed as part of the daily diet. It has a particular function when eaten, serving to enhance biological defense mechanisms, prevent specific diseases, aid in recovery from specific diseases, control physical and mental disorders and slow the aging process.

Our Pharmacology laboratory at KMK College of Pharmacy, University of Mumbai has been involved in formulation of functional foods for many health benefits. A few of the functional foods include spinach extract for anti-obesity, horse gram curry powder for hepatoprotective,, anti-hyperlipiemic and cardioprotective activities, antiobesitybittergourd extract for anti-diabetic activity, gooseberry spice for alleviation of insulin resistance and healing of diabetic wounds and a protein mix for sarcopenia. These were studied in detail for their mechanism of action and identification and quantification of their active phytoconstituents was done. A scientific validation of the functional foods was carried out by means of biochemical, hemodynamic, histopathological and gene expression studies. The functional foods display good potential for alleviating disorder/disease and may be used regularly in diet for their benefits. However, further data on their stability, efficacy, drug interactions and adverse effects is warranted.