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Functional foods: Challenges and opportunities in research and product development

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the enticement towards increased affluence and urbanization is related to a lifestyle change where the daily routine requires L less physical activity and there is greater access to foods with higher energy densities. The real challenge to the nutritional research comes to balancing the energy intake and expenditure to avoid being overweight. The nutrition science has focused on the role of essential nutrients in preventing deficiencies. However, there is a need to ensure unaltered levels of key nutrients or functional components in the context of declining energy expenditures. The challenge, therefore, is to develop effective synergies between science and food product development for the benefit of the consumer. Aspects of health linked with some of the most developed aspects of nutrition science include better early development and growth, health maintenance (e.g. immune function, gastrointestinal health, mental health, health in ageing, physical performance), reduced risk of obesity, reduced risk of chronic diet-related diseases (e.g. cardiovascular disease, type 2 diabetes and metabolic disease, musculoskeletal disease). Functional foods could play a key role in acquiring more physical activeness with better health. Liquid food formulae that deliver an appropriate balance of fluid, electrolytes and energy substrates in a convenient and easily digestible form can help physically active people. Such liquid foods may also help people who cannot easily consume enough food to meet their nutritional requirements. Specific types of carbohydrates with a range of glycaemic indices, can influence both active performance and recovery, offering potential for functional foods. A number of proposed functional food ingredients have been shown to act before the food is absorbed in the gastrointestinal tract. These include chitosan, conjugated linoleic acid, diglycerides, medium-chain triglycerides, green tea, caffeine, calcium and capsaicin.

Biography

Ravendra P.S. Chauhan has completed Master of Science (Biotechnology) from Amity University Uttar Pradesh, Noida, India. Currently, he is working as a Project Assistant in Amity Institute for Herbal Research and Studies at Amity University Uttar Pradesh, Noida. He has communicated 2 research papers in reputed journals.

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