

Probiotics: Selection criteria and mechanism of action

Introduction:

World population is increasing day by day, which cause disruption in the balance of environment in the form of food scarcity, economic crisis and climate change. Viewing these points scientist trying to recognized new and natural substance, focusing on microbes, which have vast health benefits and safe, thus the idea of probiotics came in to the real world. Probiotics are mono or mixed live microorganism which when administrated in adequate amount can confer health benefits of the host. Bacteria from genus *Lactobacillus* and *Bifidobacteria* are using since the beginning of this concept. Being used as food supplements or additive there are some selection criteria to be followed before formulation of probiotic bacteria including, proper strain identification, free from virulence factors, harbor no antibiotics resistance genes, tolerate harsh condition of stomach and intestine, showing resistance to acids, temperature and pathogens, and having adherence and gut colonization properties. Their exact mechanism of action is unknown but it is claimed that enhancement of epithelial barrier, competitive exclusion of pathogens, production of antimicrobial substances, and modulation of immune system are the possible ways of its action. Health benefits include restoration of gut micro flora, assimilation of cholesterol, production of vitamins, reduction of diabetes and help in treating various disease. To deliver the probiotic a proper vector having some defined properties are required mostly yogurt, cheese and dairy products are used. Effect of probiotics on brain is the new hot area of research in this field.

Biography:

Abrar Hussain Work as junior research fellow at International center for chemical and biological sciences (ICCBS), HEJ research Institute of chemistry, university of Karachi. He has keen research idea and basic research experiences. Besides this he has number of certificates in multidisciplinary areas. He has double master degree holder in chemistry and Islamic theology. Having completely science background in education he also done C.T and B.Ed. degree in science education. by profession he would like to become a good teacher and productive researcher

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