Potential clinical applications of probiotics

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In the beginning of the twentieth century, the beneficial roles of nonpathogenic bacteria in the gastrointestinal tract were studied. A significant number of scientific studies have been apprised in support of the concept and evidences for the use of nonpathogenic organisms (probiotics) for clinical benefits. The cases of gastrointestinal diseases are growing around the world, and most of the gastrointestinal diseases occur because of alteration of intestinal microbiota ecosystem. Modification of the intestinal flora by increasing the predominance of specific probiotics would seem a reasonable approach of attaining a prophylactic or therapeutic effect against enteropathogens. The potential benefits of modifying the intestinal flora composition of certain high-risk groups, viz. premature infants, travelers, and children receiving antibiotics are emerging in modern days. An increasing number of healthcare professionals now routinely use condition-specific probiotic products against different diseases, either to treat them or for prophylactic purposes. Probiotics seem to play an important role in the gut that produces antibacterial peptides such as acidophilin bacteriocins to inhibit pathogenic microorganisms and improve the abnormalities of both the colonic flora and the intestinal microflora. Even though there was some evidence of the safety and efficacy of probiotics for treatment of diseases, recent clinical trials have proven its efficacies against many disease conditions.

Biography

Vikas Kumar completed his PhD from Banaras Hindu University, India, and Postdoctoral studies from School of Pharmacy, Texas Tech University, Amarillo, TX. He is now an Associate Professor of Pharmacology at IIT (BHU), Varanasi, India. He has published more than 100 papers in national and international journals and has been serving as an editorial board member of many scientific journals. He has mentored several PhD and MPharm students. He is recipient of many national and international awards and is a consultant to some pharmaceutical companies and research institutes. He has visited nine countries for his professional projects.

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