

Health benefits of Milk derived biofunctional peptides

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ABSTRACT : Bioactive peptides have been defined as specific functional protein fragments that have health beneficial properties. They are also known as 'functional peptides' derived from food and exert physiological effects in the health. But these peptides are inactive within the original protein, but once released, function as regulatory compounds with hormone like activity. This activity is based on their inherent amino acid composition and sequence. Milk contains different peptide fractions that causes behavioral, physiological and vaso-regulatory systems and also helps in immune system. However, parent milk protein is hydrolyzed with pancreatic proteinase, mostly trypsin. Enzymatically hydrolysis is most common way to obtain bioactive peptide include trypsin, pepsin and chymotrypsin. Lactic acid bacteria have strong proteolytic system to degrade milk proteins, mainly caseins, producing initially peptides and then amino acids needed for their growth. These functional peptides derived from milk during the fermentation by lactic acid bacteria has been exhibited several bio-functional properties like antimicrobial, antioxidative and anti-cardio-vascular activities.

Key Words: Lactic acid bacteria, bioactive peptides, functional peptides, health benefits.