

Symposium 4: Food innovations to promote nutritional wellbeing Probiotics for infants and young children

Abstract

The intestinal microflora has an important impact on life and has important implications for health in every human being. Probiotics are live micro-organisms that might have, after consumption in specific quantities, an impact on human health. The mechanisms by which probiotics confer their health effects in general terms will be discussed. Specific reports on the probiotics *Bifidobacterium animalis* and *Lactobacillus paracasei* consistently contain statements that both short-term and long-term feeding of these probiotics to children aged 1-3 years, infants aged 0-12 months, and even to pre-term infants is not associated with differences in growth, stooling/ defecation patterns, behavioural aspects or history of illness compared to control groups. With regard to beneficial clinical effects with probiotics in general, the consistent and world-wide emergence of data that indicate beneficial clinical effects of some probiotic strains like *Bifidobacterium animalis* and *Lactobacillus paracasei* in infants and children cannot be ignored. Especially their potential benefit in preventing or ameliorating gastrointestinal inflammation and diarrhoea appears to be a realistic notion. First, inflammatory effects should translate into enhanced immunity, diminishment of existing unresponsive inflammation and correction of existing immunological defects. Second, enzymatic activities of probiotic bacteria might correct functional deficits induced by infectious diseases. Although it is unclear what the relevance is at this moment in time, some probiotics strains clearly show immune modulating effects in infants.