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Characteristic and physiological properties of *Bifidobacterium* strains isolated from different origin

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Bifidobacteria play an important role in maintaining human health and suppress harmful bacteria by controlling the pH of the large intestine. About 14 strains of the Bifidobacteria have been isolated from the feces of infants nursed exclusively from the maternal milk (their ages less than 5 months) from commercial French yoghurt (active bifidus) and from milk (celiabifidus) on MRS medium (containing 0.05% cysteine-HCl with nalidixic acid 2 mg m⁻¹). A total of six strain are strict anaerobic and gram-positive. Bifidobacteria identified as *B. longum* (60% of the samples) was the most frequently found species followed by *B. bifidum* (21.0%), *B. breve* (19%). These strains were evaluated for potential use as probiotics based on their adhesion to intestinal epithelial cells, resistance towards acidic (resistance to low pH) and bile conditions. pH values ranging from 6.5 to 7, however, these strains are sensitive to the pH 8, *Bifidobacterium* are mesophiles with optimal growth at 36°C to 41°C. All isolates studied have a fast growth in glucose.

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The effect of probiotic stains (*Bifidobacterium bifidum*) on intestinal microbiota and contamination with enteropathogenic *E. coli* (EPEC)

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This study illustrates the importance of antimicrobial *Bifidobacterium* sp. against the enteropathogens. Six strains of bifidobacteria belonging to the species *B. bifidum*, *B. longum* and *B. breve* were isolated on MRS medium supplemented with cysteine MRS 0.05% cysteine chlorhydrique and 2 mg/l nalidixic acid from stools of infants and yogurt (Activia) and saline rehydration (celia) the study of the physiological characteristics of the viruses (Bbf1, B2, B3, BV, B4, RBL8). The study of the kinetics of growth in mixed culture allowed us to choose a strain of *B. bifidum* strain as a model in vivo in the rat, watch it there is a strong possibility that the strain has resisted the gastrointestinal passage. Similarly, in this work we also records that the administration of *Bifidobacterium* strain cause a significant reduction in the rate of enteropathogenic *E. coli* in the feces of rats and the results of the macroscopic study of histological sections showed the rats in one lot who have not received *B. bifidum* displayed symptoms of severe intestinal infection accompanied by a marked contraction of the intestinal lumen (intestinal atrophy) probably due to *E. coli* contamination. These results have disappeared (batch 3) and after treatment with bifidobacteria or did not even appear (batch 2) in rats that received *B. bifidum*. The in vitro and in vivo study showed that taking probiotics (such as *Bifidobacterium*) reduces colonization of the digestive tract by pathogenic bacteria.

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