

## Growth and Some Physiological Properties of Three Selected Species of Bifidobacteria in Admixture of Soy Milk and Goat Milk

**Authors :** Ahmed Zahran

**Abstract :** Bifidobacterium breve ATCC 15700, Bifidobacterium adolescents ATCC 15704 and Bifidobacterium longum ATCC 15707 were tested for their growth, acid production, bile tolerance, antibiotic resistance and adherence to columnar epithelial cells of the small intestine of goat. The growth of all studied species was determined in the MRSL medium. B.longum 15707 was the most active species in comparison with the other two species; it was also more resistant to bile acids. The adhesion of the studied species to the columnar epithelial cells was studied. All the studied species showed some degree of adhesion; however, B.longum adhered more than the other two species. This species was resistant to four types of antibiotics and was sensitive to chloramphenicol 30 µg. The activity of Bifidobacterium species in soymilk was evaluated by measuring the development of titratable acidity. B.longum 15707 was the most active species in terms of growth and activity of soymilk. So, soymilk containing bifidobacteria could be added to goat milk to produce acceptable functional soy yogurt, using the ratio of (1:4) soy milk to goat milk. This product could be of unique health benefits, especially in the case of high cholesterol levels and replenishment of intestinal flora after antibiotic therapy.

**Keywords :** bifidobacteria physiological properties, soy milk, goat milk, attachment epithelial cells, columnar tissues, probiotic food

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