Identifcation of bifdobacterium animal ssp.lactis based on 16s-23s rrna gene and using in fermentation

Al-Azhar University, Egypt

Bi dobacterium represent one of the major genera of the intestinal tract of human and animals used as probiotics in dairy and nondairy foods for restore the intestinal micro ora which confers a health bene t. e identi cation of Bi dobacterium by phenotypic features is commonly unreliable, time, money, and e ort consuming. We sought to improve the Bi dobacterium identi cation method based on molecular level to identify probiotic bacteria in complex microbial communities. e application of 16S-23S rRNA oligonucleotide primers is the best and most reliable, rapid, and precise species and sub species identi cation approach. e ribosomal intergenic spacer region (ISR) located between the highly conserved 16S rRNA and 23S rRNA shows a high degree of variation in length and sequence and potential for intra species discrimination and providing the phylogenetic Relationship of the Genus Bi dobacterium spp. Results showed that one of the two primer sets B ac2-B ac5 species speci c gives positive results di erentiating between B. animalis ssp. Lactis isolated from breast fed infants milk of human and that isolated from feces of breast fed infant and detecting reference strain for B. animalis ssp. Lactis DSM10140. DNA sequences of the two strains were submitted to the Genbank NCBI under accession number (KT758845) named as B. animalis ssp. Lactis Egm1 (Egyptian milk) and accession number (KT758846) named as Egf1 Egyptian feces while the second primer give false positive result. Also, we aim to obtain patent protection under Intellectual property rights (IPRs) for B. animalis ssp. Lactis which was isolated from Egyptian resources to be used for a better and healthier food and dairy products.