Probiotic, prebiotic and symbiotic food development

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The market for functional foods and more specifically for products containing added probiotics, prebiotics or both (symbiotic) is expanding in many countries. A growing amount of scientific evidence has indicated numerous benefits for the regular consumption of probiotics and prebiotics. The addition of probiotics to products results in technological challenges because their viability and metabolic activity must be maintained in all steps of the food processing operation during the product shelf life and during intestinal transit. Also one must guarantee no negative influence on the sensory acceptance of the probiotic products. Microencapsulation has been considered a promising technique to improve the viability of probiotics. Important prebiotic properties that should be considered in product development are: Solubility, Viscosity increase, prebiotic resistance to thermal treatments and low pH, sweetness intensity given by the prebiotic and synergy with sweeteners. It is important to emphasize that the intake of prebiotics can result in a mild laxative effect, so there is a limit to the daily consumption of prebiotics. Yogurts and fermented milks are the main vehicle for prebiotic and or probiotic cultures, however new products are being introduced onto the international market such as powdered milk for newborn infants, butter, mayonnaise, fermented foods of vegetable origin, fermented meat products, bakery products, cereal bars, functional jams, baby foods and others. The results of 15 years of studies with the development of probiotic or symbiotic products will be presented in this lecture, including results from the development of yogurt, buttermilk, ice cream, smoothies and unfermented micro filtered milk and fruit juices with micro-encapsulated probiotics.

Biography
Adriane Elisabete Antunes de Moraes has completed her PhD at the State University of Campinas and her Post-doctoral studies at the Institute of Food Technology (ITAL, Brazil). She is the Director of the Nutrition Course at the School of Applied Sciences (FCA) of the State University of Campinas (UNICAMP). She has published more than 15 papers in reputed journals.

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