

# Beneficial Microbes: Food, Pharma, Aqua & Beverages Industry

August 25-27, 2015 Valencia, Spain

## Health in microscale

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Probiotics are “live microorganism, which, when administered in adequate amounts, confer a health benefit on the host.” Most Probiotics show a significant similarity with the beneficial microbes which are located in the human gastrointestinal tract, and are commonly from genera of *Lactobacillus* or *Bifidobacterium*. Probiotic microbes have been linked with a range of beneficial effects on host health, but mostly still need further assessment. Probiotics must stay viable in the food or nutraceutical during its shelf-life and transition through the stomach pH, hydrolytic enzymes and bile salts in the small intestine in order to meet their health claims. Considering these adverse environments encapsulation of a probiotic bacterium is a good alternative that provides protection. Encapsulated probiotics need to be released at the desired time and place so understanding the chemistry of the carrier material is important. Also, it is essential that products sold with any health claims meet the recommended criterion of minimum of  $10^6$  to  $10^7$  cfu/g viable probiotic bacteria. Current trends in the consumption of probiotics can be related with increased levels of health-awareness, and the availability of probiotics in the form of dietary supplements. Therefore, in near future, probiotics organisms will be a biological alternative to synthetic drugs in many ways which will precede the usage of antibiotic therapy. In this poster presentation, the health benefits of probiotics will be discussed in detail.

## Biography

Berrak Ertürk, Fide Sevgi and NurPolat are currently enrolled in Istanbul Technical University (ITU) along with Montana State University (MSU), where they are in a dual diploma program as bioengineering students. They will graduate in May, 2016 from MSU and Microbiology has always been an interesting topic for all of them.

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