

6<sup>th</sup> International Conference and Exhibition on

# PROBIOTICS, FUNCTIONAL AND BABY FOODS

October 02-03, 2017 London, UK

## S-layer proteins as potential mediators of probiotic functionality in *Lactobacillus* strains

**Jasna Novak**

University Zagreb, Croatia

Surface (S-) layers are regular crystalline-like structures, composed of single (glyco)protein subunits, which form the layer on the underlying cell envelope in different species of Archaea and Bacteria. Up to date, within numerous lactic acid bacteria (LAB) species these proteins have been detected only in the several members of *Lactobacillus* genus. The biological roles of S-layer proteins of *Lactobacillus* strains have not yet been completely resolved, and due to their specific features characterization of these proteins is challenging, both in terms of gaining knowledge about their role in probiotic functionality and in their biotechnological application. Till now several functional roles of the S-layers in *Lactobacillus* cells have been proposed. Recent studies reported that some probiotic properties of *Lactobacillus* bacteria, such as adhesion, pathogen exclusion and immunomodulation have been related to the occurrence of S-layers. The focus is particularly given to the importance of S-layer proteins in probiotic performing effects of *Lactobacillus* strains which are related to the survival in stress conditions, competitive pathogen exclusion, bacterial cell adhesion to intestinal epithelial cells and enhancing host immune function as well as mucosal barrier.

jbeganov@pbf.hr