

Increasing bacterial resistance to classical antibiotics and emergence of multi-resistant strains impose a constant threat. Antimicrobial compounds of bacterial origin are an important source of new antibacterial therapeutic agents needed to answer this issue. Three families of lipopeptides produced by *Bacillus subtilis* – surfactins, fengycins and iturins represent an interesting class of such compounds. They exert a wide range of biological activities and possess a good potential for modifications and improvement of their structure and function.

Lipopeptides produced by *B. subtilis* are surface active compounds capable of reducing surface/interface tension. The variety of their biological activities stems from their ability to insert into lipid membranes leading to disruption and permeabilization of the membrane. Specific mode of action differs between the three families but the common feature is that it is concentration dependent. First, lipopeptides induce ion leakage, pore formation and then the increasing concentration eventually causes complete solubilisation of the membrane in a detergent-like manner. In addition, surfactin can inhibit some enzymes by chelating divalent cations required for their activity. These properties make the *B. subtilis* lipopeptides promising compounds for commercial applications.