

Abstract

Bacteriocins are ribosomally synthesised antimicrobial peptides and proteins produced by bacteria. One of the groups of bacteriocins are microcins. Microcins are antimicrobial peptides with size under 10 kDa, produced by bacteria of the *Enterobacteriaceae* family. Microcins form a heterogenous group of bacteriocins, not only in terms of mechanism of action but also other characteristics presented in this work. These characteristics include genetic determinants of microcins, posttranslational modifications, transport and aslo how immunity of the producing cell is ensured. Compared to other bacteriocins, microcins are less researched. However, there is a growing number of articles pointing to their potential use in medicine. This bachelor thesis includes current knowledge about the structure and mechanism of action of most researched microcins (B17, J25, C7 and E492), which are all very different from each other. The knowledge about microcins presented in this work is the basis for further research concerning their practical use.

Key words: bacteriocins, microcins, antimicrobial peptides, posttranslational modification, Enterobacteriaceae