

ENTEROCINS AND THEIR APPLICATION IN FOOD INDUSTRY

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The Enterococcus genus is one of the important members of lactic acid bacteria. Enterococcus species are found in various environments, especially in the intestine of humans and animals. Although sometimes associated with pathogenicity, enterococci are used as starter cultures in fermented foods, probiotic cultures and protective cultures. Currently, enterococcus species have been studied for the bacteriocin production. Bacteriocins are ribosomally synthesized antimicrobial peptides produced by many different bacterial species including many members of the lactic acid bacteria. Bacteriocins produced by enterococci are called enterocins. Until now, a large number of enterocins produced by *Enterococcus faecium*, *Enterococcus faecalis*, *Enterococcus durans* and *Enterococcus mundtii* have been described and many have been fully characterized at the biochemical and genetic level. Enterocins are found within the class I, class II and class III bacteriocins. The primary target of enterocins, as most bacteriocins, is the cytoplasmic membrane of the bacteria. Enterocins have attracted considerable interest for their potential use as food biopreservatives as they inhibit not only closely related species but also Gram positive and Gram-negative food-spoilage and foodborne pathogens, including *Listeria monocytogenes*, *Staphylococcus aureus*, *Bacillus cereus*, *Salmonella* Enteritidis, *Salmonella* Typhimurium, *E. coli*. In particular, enterocins with high anti-listerial activity are promising candidates as useful antimicrobial agents in food preservation. Here we review the literature with respect to classification, physicochemical properties, antimicrobial spectrum, mode of action and biosynthesis of enterocins and their application in food industry.

Keywords: Bacteriocin, enterocin, food application

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