

## CHARACTERISTICS OF BACTERIOCINS AND ITS HISTORY

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A great number of Gram (+) and Gram (-) bacteria produce during their growth, substances of protein structure (either proteins or polypeptides) possessing antimicrobial activities, called bacteriocins. Traditional antibiotics are also produced by some bacteria but the traditional antibiotics and bacteriocins should be considered as different antimicrobial compounds. Bacteriocins are ribosomally synthesized antimicrobial peptides that are active against other bacteria, either of the same species (narrow spectrum), or across genera (broad spectrum). Bacteriocins of gram-positive bacteria differ from gram-negative bacteriocins in two fundamental ways. First, bacteriocin production is not necessarily the lethal event it is for gram-negative bacteria. In addition, the gram-positive bacteria have evolved bacteriocin-specific regulation, whereas bacteriocins of gram-negative bacteria rely solely on host regulatory networks. The antimicrobial peptides have been grouped into different classes based on the different criteria such as producer organisms, molecular sizes, physical properties, chemical structures, mode of actions etc., which have sometimes resulted in different names for the same compounds. The term bacteriocin did not appear until the fifties. This bacteriocin definition is based on the properties of the colicins, first characterized in Gram-negative bacteria in 1925. In those days, during the fifties and sixties, the bacteriocin world was mainly made up of bacteriocins from Gram negative bacteria. The eighties saw an increase in the number of publications on bacteriocin for both colicin type- and non colicin bacteriocins. A new category of bacteriocins has emerged over the last two decades: that of the microcins.

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