SCREENING FOR ANTI-*LISTERIA* BACTERIOCINS PRODUCED BY LACTIC ACID BACTERIA ISOLATED FROM GOAT MILK IN CEARÁ, BRAZIL

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Different samples of goat milk obtained at Embrapa Goats and Sheep were screened for the presence of bacteriocins producing LAB. The potentially bacteriocin positive colonies were isolated, obtained as pure cultures and tested for bacteriocin production by spot-on-low method. A total of 24 isolates were selected for future study based on their antimicrobial activity against *Listeria monocytogenes* and *Enterococcus* spp., morphology, gram-staining, catalase and oxidase reaction. The selected isolates were subject of differentiation based on RAPD-PCR analysis and grouped in 6 classes. Representatives from every group been identified based on 16S rRNA sequencing and identified as *Lactobacillus plantarum* (isolates from four groups), *Enterococcus faecium* (isolates from one group) and *Enterococcus casseliflavus* (isolates from one group). Produced bacteriocins inhibited the growth of large number of *Enterococcus* spp. and *Listeria monocyotenese* strains from different serological groups. The antimicrobial activity of studied bacteriocins was inhibited after treatment with proteolytic enzymes. No significant changes in bacteriocin activity of all isolates were recorded when they were exposed to pH from 2.0 to 12.0 and after 2h to temperatures from 25^{o}C to 100^{o}C.

On the basis of the performed PCR reactions targeting different bacteriocin genes no evidences for the presence of pediocin PA-1, sakacin G, sakacin P, plantaricin NC8, plantaricin W, enterocin A and enterocin L50B in the total DNA from tested starins were obtained. Curvacin gene was carried by one *Lactobacillus plantarum* and by *Enterococcus faecium* strains. Positive signal for enterocin P was generated by one of *Lactobacillus plantarum* strains. A different *Lactobacillus plantarum* strain was positive for plantaricin S and nisin. Enterocin B was detected in 2 different *Lactobacillus plantarum* strains and in *Enterococcus faecium*. Considering the spectrum of antimicrobial activity exhibited by the test LAB, the isolated *Lactobacillus plantarum*, *Enterococcus faecium* and *Enterococcus casselinoflavus* could be used in a mixed starter culture for fermentation of milk products.