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Impact of putative bacteriocins against multidrug resistant clinical isolates

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Background: Bacteriocins are well known for their antibacterial activity against multidrug resistant strains (MDRs). *Lactobacilli* are known as friendly bacteria for their antibacterial activities against pathogens. The antibacterial activity of different strains of Lactobacilli was analyzed against multidrug resistant strains (MDRs).

Objectives: Screening and characterization of multidrug resistant strains (MDRs). Characterization of the putative bacteriocins produced by selected bacteria (*Lactobacilli*). Finally check the antibacterial effect of putative bacteriocins against multidrug resistant strains (MDRs).

Materials and Methods: Multidrug resistant clinical isolates were selected on the basis of their MAR index. Well-Diffusion assay was used for screening of putative bacteriocins produced by *Lactobacillus* strains against MDRs.

Results: Multidrug resistant strains were selected based on MAR (Multiple antibiotic resistance) index. Five bacteriocins obtained from *Lactobacillus* strains isolated from commercial products. These bacteriocins showed a strong anti-bacterial activity against selected MDRs. Decrease in zone sizes was observed when putative bacteriocins were treated with heat, SDS and Protinase k. It was observed that *Lactobacillus* showed a significant antibacterial activity in-vitro in the presence of putative bacteriocins against selected MDRs and further experiments are under process.

Conclusion: Putative bacteriocins produced by *Lactobacilli* exhibit significant antibacterial activity against MDRs. The peptidal component of these bacteriocins can be used as an alternative therapy. Hence, it is necessary to purify the antibacterial molecule out of putative bacteriocin for further analysis.

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