

Preliminary Evaluation of the Probiotic Potential of *Leuconostoc mesenteroides* Strain Isolated from Goat's Milk

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Abstract : One strain (V1) of *Leuconostoc mesenteroides* was isolated from goat's milk collected from El Bayadh which is located in the west of Algeria and was characterized by phenotypic and biochemical methods. This strain was tested for their antimicrobial activity against indicator bacteria (*Staphylococcus aureus* ATCC 43300, *Listeria innocua* ATCC 33090, *Listeria ivanovii* ATCC 19119) and was evaluated for certain properties relevant to probiotic including acid resistance (pH 2 ; 3 and 4), bile tolerance at 0.5%, 1% and 2%, pepsin resistance 3mg/ml at pH 2 and 3, hemolytic activity and antibiotics sensitivity. Our results revealed the strain V1 showed antagonistic activity against *Staphylococcus aureus*, *Listeria innocua* and *Listeria ivanovii*, due to a production of proteinous nature substances. The strain was resistant to pH 3 and 4, bile salts at 0.5%, 1% and 2% and pepsin at pH 3; and was γ -hemolytic and susceptible to four antibiotics: Chloramphenicol, pristinamycin, Clindamycin and Lincomycin. These results may be considered the strain V1 as suitable probiotic candidate.

Keywords : antimicrobial, goat's milk, *Leuconostoc*, probiotic

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