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Molecular detection of virulence genes in *Staphylococcus aureus* associated with bovine mastitis

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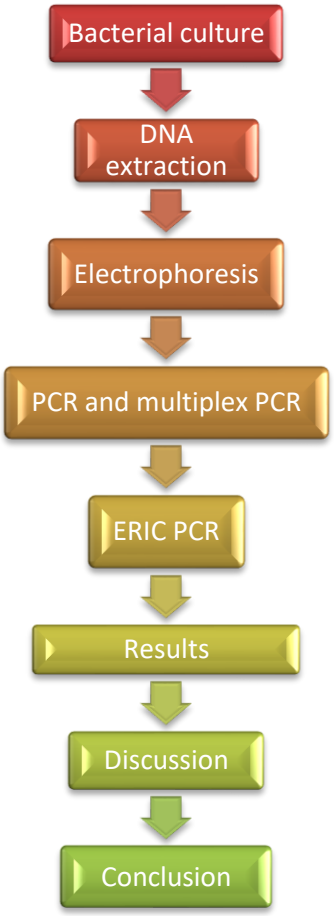
Graphical Abstract



Abstract.

Biofilms are complex microbial communities in which a single species of microorganism can subsist or, commonly, can be polymicrobial, in which a great diversity of bacteria and fungi can be contained. These aggregates consist of a set of microorganisms embedded in a viscous matrix consisting mainly of sugars and proteins. Tests were carried out with the ERIC oligos in order to analyze and know the existing genomic diversity; resulting in only one common ancestor and two generations. It is worth mentioning that the most important characteristics are preserved, including ica genes, but only from the second to the third generation.

Introduction

Bacterial biofilms are microbial communities made up of an extracellular matrix of polysaccharides, where groups of bacteteria mainly take refuge from environmental factors or antibiotic, increasing their pathogenesis. Such biofilms constitute a serious problem in milk production, causing bovine

mastitis, which causes considerable economic losses and decreases the quality of milk. In the present work, we analyzed which genes are involved in the formation of biofilms and if these are related to the isolates that best form said matrix.

Finally, genomic diversity was analyzed using ERIC oligonucleotides.

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