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## CHARACTERIZATION OF *STREPTOCOCCUS UBERIS* STRAINS UNDER PLANKTONIC AND BIOFILM GROWTH CONDITIONS

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**B**ovine mastitis is a disease that causes significant economic losses to the dairy industry in the world, being the streptococci and enterococci the main environmental bacteria involved. *Streptococcus uberis* is the major environmental pathogen. Difficulties in treatments of recurrent mastitis infections are related to the capacity of the pathogens to form biofilms. Currently, standard antibiotic therapy designed for bacteria isolates at planktonic state is applied. Nevertheless, pathogenic patterns and antimicrobial resistance are different from biofilms, leading to diminished cure rates. The progress of biofilm is influenced by the ability of the strains to adhere to bovine mammary epithelial cells. Furthermore, pathogen agents can adhere to abiotic food processing structures and survive in hostile conditions through biofilms. Several virulence traits have been described in *S. uberis* strains, including the facility to bind to the host's cells surface by SUAM protein, which is implicated in adherence and internalization, by its linking to lactoferrin. Previously, we reported that the *S. uberis* strains isolated from mastitis cows of the central dairy region of Argentina were able to form biofilm and different environmental conditions can influence the capacity to form biofilm. The proposal of this work is to evaluate pheno and genotypic features of two *S. uberis* isolates. The strains were identified according to standard protocols and confirmed by restriction fragment length polymorphism analysis of 16S rDNA (16S rDNA RFLP). *S. uberis* strains under planktonic and biofilm growth conditions will be assayed by Pulse Field Gel Electrophoresis (PFGE); adherence and internalization using the MAC-T cell line; scanning electron microscopy (SEM) and qRT-PCR for *sua*, *lbp* and *hasC* genes. The study will provides new information about pheno and genotypic traits involved in biofilm production of this important pathogen associated to mastitis and will facilitate the developing of new therapeutic strategies.

### Biography

Elina Reinoso is a Microbiologist and received her PhD in Biological Sciences from the Universidad Nacional de Río Cuarto (UNRC- Argentina) in 2004. She obtained DAAD fellowship to complete her Doctoral studies in Germany. Currently, she is member of the Research Career of CONICET and she is working as Professor in Department of Microbiology and Immunology, UNRC. She has guided PhD students of Argentina and Brazil and personal tutor of the Final Project Course students. She has authored more than 20 scientific articles. She serves as a Reviewer for several reputed international journals. She obtained two scientific mentions. She is also member of *American Society for Microbiology* (ASM), as well as of different research associations of Argentina

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