PRELIMINARY COMPARISON FOR GENES INVOLVED IN BIOFILMS IN COAGULASE-NEGATIVE *STAPHYLOCOCCI* (CONS) AND *S. AUREUS* STRAINS ISOLATED FROM MILK SAMPLES OF SICILIAN FARMS

M. Vitale[1], L. Scatassa[2], D. Vicari[3], A. Carrozzo[2], F. Sciurba[4], C. Piraino[4], D. Schillaci[5], V. Di Marco Lo Presti[6]

[1]Molecular Biology, [2]Area Assistenza Produzioni, [3]Area Palermo, [4]Microbiology, Istituto Zooprofilattico Sperimentale of Sicily A. Mirri, [5]Dept. STEBICEF, Università degli Studi di Palermo, Palermo, [6]Area Barcellona Pozzo di Gotto, Istituto Zooprofilattico Sperimentale of Sicily A. Mirri, Barcellona Pozzo di Gotto, Italy

Mastitis in small ruminant farms are quite spread in Sicily. Coagulase-negative staphylococci (CoNS) are frequently isolated from milk of animals with sub-clinical mastitis. They are less pathogenic compared to *S.aureus* but can cause persistent infections with increased somatic cell count (SCC) in milk and consequentially reduction of milk quality. Bacteria organized in biofilm communities could be responsible for the persistency of infection.

Sicilian sheep flocks interested in clinical and sub-clinical mastitis were selected to isolate bacteria strains from milk samples. We started a comparison of *S.aureus* and CoNS isolates for the presence of *bac* and *ica* genes and the evaluation of their capability in biofilm formation.

The Bacteria were isolated from bulk milk samples. The isolated colonies were typed by API Staph strip (BioMerieux). PCR was performed with primers for *ica* and *bap* genes. The analysis for biofilm formation was performed by safranin method in microtiter plates.

The results showed that intercellular adhesion (*ica*) operon was present in many isolates of both *S.aureus* and CoNS (circa 85%) whereas the biofilm-associated protein *bap* gene was present at higher percentage (43%) compared to the *S.aureus* isolates (8%).

A relation on *ica* operon presence and biofilm formation seems to be present for *S. epidermidis* and not for *S. aureus* but analysis in a larger number of isolates of both coagulase positive and negative staphylococci will be performed.

The technical contribution of Dr. La Giglia is highly appreciated. The work is granted by RCSI 2010 to M. Vitalee.