TITLE: BIOFILME PRODUCTION BY *Staphylococcus* spp. OBTAINED FROM GOATS MASTITIS CASES THROUGH THE MICROPLATE ADHERENCE TECHNIQUE

AUTHORS: TEIXEIRA, S.K.R.; COSTA, M.M. AMORIM, V.S.

INSTITUTION: UNIVERSIDADE FEDERAL DO VALE DO SÃO FRANCISCO – UNIVASF, PETROLINA, PE (RODOVIA BR 407, 12 LOTE 543 - PROJETO DE IRRIGAÇÃO NILO COELHO - S/N C1, CEP 56300-000, PETROLINA - PE, BRAZIL)

ABSTRACT:

Staphylococcus spp. is an infectious agent of major importance for animal health, as it causes infections such as mastitis, which is characterized as an inflammation of the mammary gland that is responsible for physicochemical changes in milk. This microorganism presents a set of virulence factors, among them the formation of biofilm, contributing to colonization and development of lesions in its hosts. Thus, the objective of this work was to determine the biofilm formation by *Staphylococcus* spp. in goat milk. These isolates were obtained from mastitis in goats. It was compared the production to the conventional medium (tripiticase soy broth plus glucose- TSB), as well as it was evaluated the difference observed of the results obtained staining and without staining techniques. For this study, 25 isolates of *Staphylococcus* spp. were selected and inoculated in microplates containing the conventional (TSB) and alternative media (milk). Then, they were incubated in at 37ºC for 24 hours, and it was performed the quantification without staining and stained with gentian violet through the ELISA reader. Among the 25 isolates grown in TSB, 10 samples showed biofilm production (40%) when it was stained with gentian violet and 15 samples were considered positive for the medium without staining (60%). In alternative medium (milk) and staining with gentian violet, 12 samples were positive (48%), while for the medium without staining, 14 samples were positive for biofilm formation (56%). The staining method used with the conventional medium did not present significant results when compared to the test without staining. On the other hand, the alternative medium (milk) presented a better result for biofilm formation, and the samples without dye had a greater significance. It was possible to conclude that the samples without dye in goat milk showed a higher biofilm formation.

Keywords: Milk goats, TSB-plus glucose, Mastitis, *Staphylococcus spp*.