

TITLE: CHARACTERIZATION OF BIOFILM FORMING ABILITY OF *Staphylococcus schleiferi* SAMPLES ISOLATED FROM DOGS

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ABSTRACT

Staphylococcus schleiferi is a variable coagulase species that contains two subspecies, *S. schleiferi* subsp. *coagulans*, (positive result for the tube coagulase test), and *S. schleiferi* subsp. *schleiferi*, (negative result). This species is associated with topic infections in dogs, especially otitis, and is not frequently isolated from colonized dogs, without any clinical manifestations. Despite being a bacterial species associated with the canine host, it has already been isolated causing infections in humans, which evidences its zoonotic potential. This situation seems to be more common in immunocompromised individuals. As other species of the genus, the biofilm formation may also constitute an important virulence factor of *S. schleiferi*. However, little is known about its biofilm forming ability, due to the lack of studies that deal with this subject. The objective of this work is to evaluate the biofilm forming ability of *S. schleiferi* isolated from dogs affected with topic infections and colonized dogs. Samples were collected from infected dogs (pyoderma and otitis) and colonized dogs (nostrils and perineum). Staphylococcal samples were identified by mass spectrometry (MALDI-TOF MS). Biofilm formation was evaluated by a quantitative microtiter plate essay. A total of 77 samples of *S. schleiferi* were isolated from the dogs. All the isolates belonging to *S. schleiferi* species were capable to form biofilm in some level. Most part of the strains, 72,8% or 56/77, were classified as strong biofilm producers. The other isolates were classified as moderate biofilm producers (16,8% or 13/77) and weak biofilm producers (10,4% or 8/77). Like other Staphylococcal species, *S. schleiferi* has a high capacity to form biofilm, and as it is a worrying problem, more attention should be paid to this subject.

Keywords: *Staphylococcus schleiferi*, biofilm, pyoderma, dogs

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