TITLE: CARACTERIZATION OF BIOFILM FORMING ABILLITY 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 week 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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