**Title:** Diversity of Staphylococcus strains isolated from canine bacterial superficial pyoderma forms

**Investigators:**
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**Study description:**
Superficial pyoderma is often recurrent, causes varying degrees of pain and pruritus and is frequently difficult to resolve due to emergence of the multidrug resistant bacterial strains. Typical clinical manifestations of canine superficial pyoderma include three clinically and histopathologically distinctive forms: superficial bacterial folliculitis (SBF), bullous impetigo (BI) and epidermal collarettes (EC). The current therapeutic approach in practices worldwide involves sterile sampling frequently of a single pyoderma-associated skin lesion for bacterial culture and administration of appropriate systemic antimicrobial therapy based on susceptibility results from testing one bacterial colony in the microbiology laboratory. A potential consequence is treatment failure due to the use of an antimicrobial agent to which non-cultured bacterial strains are resistant. Here we propose to compare the antibiotic susceptibility and genetic relatedness of bacterial isolates across multiple superficial pyoderma lesions within the same dog to elucidate any possible variability in the staphylococcal strains that could potentially result in variable antimicrobial susceptibility patterns and therapeutic recommendations by the microbiology laboratory.

Ten dogs of any breed, body weight and sex with superficial pyoderma will be enrolled. Participation consists of a single visit during which sterile culture swabs will be collected from all active lesions of superficial bacterial folliculitis (SBF), bullous impetigo (BI) and/or epidermal collarettes (EC). Dogs with different superficial pyoderma forms (SBF, BI and EC) will be screened for active lesions defined by presence of surrounding lesional erythema. Dogs currently treated with antibacterial shampoos, systemic and/or topical antibiotics will be excluded. All pyoderma lesions in the dog will be collected for bacterial identification and susceptibility testing.

**Duration of study:**
The study is ongoing and will continue until a total of 10 dogs with lesional pyoderma are enrolled.

**Potential benefits to veterinary medicine:**
Data from this study will provide guidance to clinicians so that unnecessary antibiotic usage in multidrug resistant canine superficial pyoderma strains can be avoided.