

ANTIFUNGAL SUSCEPTIBILITY OF CANINE AND FELINE *MALASSEZIA* SPP. ISOLATES TO LACTOFERRICIN: PRELIMINARY IN-VITRO STUDY

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Introduction: *Malassezia* spp. is a fungus isolated from the skin and mucosae of dogs and cats, which may cause dermatitis and otitis. Therapies include the use of antibiotics, antifungals and glucocorticoids. Because of the antibiotic-resistance phenomenon, new alternative therapies are necessary. Bovine lactoferricin (Lfc) is a peptide derived from proteolytic cleavage of lactoferrin with proven antibacterial, antifungal and immunostimulatory activity. The aim of this study was to evaluate the antifungal susceptibility of *Malassezia* spp. to Lfc-Candioli Pharma (water solution 20%) using a microdilution method.

Materials and Methods: Fifty strains of *Malassezia* spp. collected from 50 animals (five cats, 45 dogs) affected by dermatitis and/or otitis externa and classified based on clinical signs and/or skin biopsies were cultured on Sabouraud's dextrose broth. Minimal inhibitory concentrations of Lfc were measured using the following concentrations: 13.3%, 10%, 6.7 %, 3.3% and 1.8%. Plates were incubated at 35°C and read 4 days after inoculation. To check the reproducibility of the procedure, all of the isolates were double tested and quality controls were performed.

Results: All isolates were inhibited by Lfc with different minimum inhibitory concentration value. The product showed antifungal efficacy of 100% up to a dilution corresponding to 10% of Lfc. The first resistance was observed from 6.7% to the total resistance of 1.8%.

Conclusions: These results suggest a potential antifungal efficacy of Lfc *in vivo*, even if in-vitro data should be considered with caution until standardized methods and correlation with clinical outcomes has been evaluated.