

**Título: EVALUATION OF THE ANTIFUNGAL ACTIVITY OF ESSENTIAL OILS AGAINST *Malassezia pachydermatis* ISOLATES**

**Autores** Verdi, C.M.<sup>1</sup>, Schlemmer, K.B.<sup>1</sup>, Jesus, F.P.K.<sup>2</sup>, Ledur, P.C.<sup>1</sup>, Zimmermann, C.E.P.<sup>1</sup>, Alves, S.H.<sup>1</sup>, Santurio, J.M.<sup>1</sup>,

**Instituição** <sup>1</sup> Departamento de Microbiologia e Parasitologia, Laboratório de Pesquisas Micológicas (LAPEMI), Universidade Federal de Santa Maria (UFSM), Santa Maria, Brasil.

<sup>2</sup> Instituto de Química Orgânica, Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre, Brasil.

**Resumo:** *Malassezia pachydermatis* is a yeast belonging to the normal flora of animals, and usually identified as responsible for external otitis and recently by various forms of dermatitis, especially in dogs. In humans *M. pachydermatis* has been reported to cause systemic infections, particularly in immunocompromised patients and newborns in intensive care units. To evaluate the susceptibility of yeast-like fungi, techniques are used to provide results of Minimum Inhibitory Concentration (MIC). Currently, the most widely used method is based on the micro susceptibility antifungal agents become important, primarily due to the increase of serious fungal infections and concomitant emergence of resistance to antifungal agents. This study aimed to evaluate the in vitro susceptibility of *Origanum vulgare* essential oil (oregano), *Thymus vulgaris* (thyme) and *Cinnamomum zeylanicum* (cinnamon) in 20 isolates of *M. pachydermatis*, by the CIM study by microdilution technique broth, adapted to *M. pachydermatis* and concentration of Fungicide Minimum (CFM) determined by the lowest concentration of essential oil in which the subculture showed no fungal growth. The MICs for the oregano and thyme ranged from 80- 320µg/ml, while for the shuttle MICs ranging from 5-160µg/ml. The average concentrations of essential oils capable of inhibiting the growth of *M. pachydermatis* were respectively 113,13µg/ml (oregano), 226,27µg/ml (thyme) and 20,00µg/ml (cinnamon). The CFM for three essential oils is shown in table 1. The variation of the CFM was respectively 320-640 mg/mL for the oregano and thyme and 80- 320µg/mL for cinnamon. The lower MICs were observed with cinnamon essential oil. The activity of this essential oil is a finding that reinforces the importance of these essential oils for future studies aimed at treatment of this mycosis.

**Keywords:** *M. pachydermatis*, yeast, essential oils.

**Agência Fomento:** Capes