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In vitro antimicrobial activity of essential oils against *Pasteurella* spp. isolated from the oral cavity of healthy domestic cats and with gingivitis

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The oral microbiota of domestic cats is composed of several microorganisms that play an important role in the disease and health of the animal. Recently, some studies have shown the strains of *Pasteurella* isolated from the oral cavity of domestic cats' present antimicrobial resistance. In this context, the essential oils (EOs) are presented as a therapeutic alternative to this antimicrobial resistance. Thus, the study aimed to evaluate the antimicrobial action of EOs from *Citrus bergamia (bergamot), Anthemis nobile (roman chamomile), Cymbopogon citratus (lemongrass), Copaifera officinalis (Copaiba), Eugenia caryophyllus* (clove) and *Melaleuca alternifólia* (tea tree) against Pasteurella spp. isolated from the oral cavity of healthy cats and with gingivitis. The minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC) were determined for each isolate by broth microdilution technique, from the maximum concentration of 3200 µg mL-1. The strains of *Pasteurella* spp. were sensitive to the EOs of cloves (MIC= 200 to 400 µg mL-1, MBC=200 to 800 µg mL-1), lemongrass (MIC= 50 to 400 µg mL-1, MBC= 50 to 400 µg mL-1), melaleuca (MIC= 400 µg mL-1, MBC= 400 to 1600 µg mL-1) and roman chamomile (MIC= 200 to 1600 µg mL-1, MBC= 400 to 1600 µg mL-1). However, the *Pasteurella* spp. isolated of domestic cats were not sensitive to copaiba and bergamot EOs. EOs showed the highest antimicrobial activity against the strains of *Pasteurella* spp. isolated from cats with gingivitis. These results confirm the potential of the antimicrobial action of some essential oils for treatment of oral infections.

Biography

Camila Aparecida Cruz Reis is pursuing her two-year degree in Veterinary Medicine from University Brazil, where during her undergraduate studies, she worked with Bird Microbiology. Currently, she is a Master student at the Veterinary Medicine Department of the Faculty of Animal Science and Food Engineering. Her research line aims to identify bacteria of the oral cavity of domestic cats and dogs with importance in public health.

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