Title: ANTIBACTERIAL ACTIVITY OF OREGANOL P73

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Abstract:

The emergence and spread of multi-resistant pathogenic bacteria have increased in recent years and have become a public health problem in Brazil and the world. Indiscriminate use of antimicrobials in human and veterinary medicine, livestock industry, and disregard for discharge of effluents, have contributed significantly to the selection of multi-resistant bacteria, this problem unleashed the search for new drugs that are effective in combating these microorganisms. One of the alternatives is the use of natural compounds, as Oreganol P73 (North American Herb& Spice). This oil is obtained by steam distillation, without chemicals or solvents in the extraction process. Antibacterial activity was tested against gram positive bacteria, *Staphylococcus aureus* ATCC 25923, *Streptococcus mutans ATCC* 25175, and gram negatives *Escherichia coli* ATCC 25922 and *Salmonella* Typhimurium UK-1. Profile of sensitivity of strains to antimicrobial compound, quantitatively, it based on microdilution technique. The minimal inhibitory concentration (MIC) was determined, this method was proposed by the National Committee for Clinical Laboratory Standarts (Clinical and Laboratory Standards Institute) (CLSI, 2012), with necessary modifications. Oreganol showed antibacterial activity against gram-positive and gram-negative bacteria. *Escherichia coli* showed the lowest MIC (0.62% v / v), *Staphylococcus aureus* and *Salmonella* Typhimurium UK-1 were significant results (1.25% v / v) and *Streptococcus mutans* was more resistant (5% v / v). Oreganol showed antibacterial activity against the tested strains. This study is important because natural antibiotics can be a good alternative for clinical treatment. It does not irritate or artificially stimulate the body and it is more accessible, easily to finding and is cheaper than others commercial antibiotics.

Keywords: oreganol, antibacterial activity, minimum inhibitory concentrations.

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