World Academy of Science, Engineering and Technology
International Journal of Pharmacological and Pharmaceutical Sciences
Vol:8, No:11, 2014

Antibacterial Activity of the Essential Oil of Origanum glandulosum on Bacterial Strains of Hospital Origin Most Implicated in Nosocomial Infections

Authors : A. Lardjam, R. Mazid, S. Y. Boudghene, A. Izarouken, Y. Dali, N. Djebli, H. Toumi

Abstract : Origanum glandulosum is an aromatic plant, common in Algeria and widely used by local people for its medicinal properties. The essential oil from this plant, which grows in the west of Algeria, was studied to evaluate and determine its antibacterial activity. The extraction of the essential oil was performed by water steam distillation; the yield obtained from the aerial parts (1.78 %) is interesting, its chromatographic profile revealed by TLC showed the presence of phenolic compounds thymol and carvacrol. The evaluation of the activity of the essential oil of Origanum glandulosum on bacterial strains of hospital origin, ATCC, MRB, and HRB, most implicated in nosocomial infections (Staphylococcus aureus ATCC 25923, Staphylococcus aureus ATCC 43300, Enterococcus faecalis ATCC 29212, Escherichia coli ATCC 25922, Pseudomonas aeruginosa ATCC 27853, Staphylococcus aureus resistant to meticillin, Enterococcus faecium, VA R and R TEC, Acinetobacter baumanii, IMP R and R CAZ, Klebsiella pneumonia carbapenemase-producing) by the method of aromatogramme and micro atmosphere, shows that the antibacterial potency of this oil is very high, expressed by significant inhibition diameters on all strains except Pseudomonas aeruginosa, and low MICs and is characterized by a bactericidal action.

Keywords : antibacterial activity, essential oil, HRB, MBR, nosocomial infections, origanum glandulosum
Conference Title : ICPPNP 2014 : International Conference on Pharmacognosy, Phytochemistry and Natural Products
Conference Location : Istanbul, Türkiye
Conference Dates : November 28-29, 2014