II SIMPÓSIO INTERNACIONAL EM INVESTIGAÇÕES QUÍMICO-FARMACÊUTICAS

Itajaí-2019

Área: FMG 33

EVALUATION AND CHEMICAL CHARACTERIZATION OF THE INFLORESCENCES ESSENTIAL OIL OF *Eupatorium intermedium* FROM PARANÁ ATLANTIC FOREST - BRAZIL.

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INTRODUCTION

Eupatorium intermedium is a native species found in Southern Brazil belonging to the Asteraceae family. This family presents a great wealth of species with therapeutic interest, many of them, widely studied from the chemical and pharmacological point of view. This study investigated the chemical composition, yield and the antimicrobial potential of the essential oil of the inflorescences of Eupatorium intermedium.

MATERIAL AND METHODS

The biological study was carried out with four bacterial strains such as Escherichia coli, Bacillus cereus, Staphylococcus aureus, Listeria monocytogenes. Collection was carried out in the Private Reserve of Natural Heritage (RPPN) Butuquara, county of Palmeira – PR, with training in general fields. Extraction of essential oil from fresh inflorescences was performed by hydrodistillation in a Clevenger type apparatus. The antibacterial assays were performed by agar diffusion method, using tetracycline as a positive control.

RESULTS

The inflorescences essential oil yield was 1.02%.The chemical composition indicated the presence of α-Pinene (25,88%), Sabinene(2,74%), β-Pinene (39,12%), Myrcene(2,76%),α-Phellandrene (1,19%), ρ-Cymene(3,67%), Limonene(12,36%), (E)-β-Ocimene (2,95%),(E)-Caryophyllene (1,51%),trans-Muurola-4(14)5-diene (4,03%), Bicyclogermacrene(2,71%)

Spathulenol (1,08%). On the other hands,the antibacterial assay demonstrated that pathogen bacteria assayed were sensitive to essential oil. L. monocytogenes has shown an inhibition halo with 16mm, E. coli 14 mm, B. cereus 14 mm and S.aureus an inhibition halo with 13mm. However, further studies are necessary to determine the optimal concentrations of Eupatorium intermedium to act as a natural antimicrobial.

CONCLUSIONS

It was verified that E. intermedium essential oil presents chemical components of great importance, which have biological activity and can be applied in the protection of foods as antimicrobial, in pharmaceutical formulations, confirming the importance of the Asteraceae family as a source of bioactive compounds.

REFERENCES

ADAMS, R. P. (2017). Identification of essential oil components by gas chromatography/mass spectrometry, ed. 4.1, Allured Pub. Corp.

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