

123 YEARS OF PASTEUR INSTITUTE NIŠ

55th DAYS OF PREVENTIVE MEDICINE

INTERNATIONAL CONGRESS

BOOK OF ABSTRACTS



26-29. 09. 2023.
NIŠ, SERBIA

ORGANISED BY



UNIVERSITY OF NIŠ
FACULTY OF MEDICINE NIŠ



PUBLIC HEALTH INSTITUTE NIŠ



SERBIAN MEDICAL SOCIETY OF NIŠ

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FACULTY OF MEDICINE, UNIVERSITY OF NIŠ
SERBIAN MEDICAL SOCIETY, NIŠ**

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Prof. dr Branislava Kocić

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ORAL PRESENTATION

ANTIMICROBIAL POTENTIAL OF *HYSSOPUS OFFICINALIS* ESSENTIAL OILS

Dimitrijević Marija¹, Mihajlov Krstev T.,² Marković M.,³ Stojanović G,² Miladinović D¹

¹ Faculty of Medicine, University of Niš, Niš, Serbia

² Faculty of Science and Mathematics, University of Niš, Niš, Serbia. ³ Institute of Forestry, Belgrade, Serbia

Objectives: Essential oils (EOs) are mainly secondary metabolites of plants and have been reported to have various biological activities such as antibacterial, antifungal, anticancer, anti-inflammatory, etc.

Biological activity studies have shown that *Hyssopus officinalis* EO has significant antibacterial and antifungal activity. The aim of the present study was chemical and antimicrobial study of essential oil from natural populations *H. officinalis* from Eastern Serbia: Klenje village (sample 1), Vidlič mountain (sample 2) and Kravlje village (sample 3).

Methods: Gas Chromatographic-Mass Spectrometric Analysis (GC-MS) analyses were performed to the analysis of essential oils. The antimicrobial activity was investigated by the broth microdilution method.

Results: Dominant components of EOs are: β -pinene, 45,4% (sample 1); eucalyptol, 33,4% (sample 2) and cis-pinocamphone 41,7 (sample 3). The lowest values of bacteriostatic and bactericidal activity (for the most number of bacteria) were recorded for the essential oil from Kravlje village. At the same time, this EO exhibit the best antifungal activity.

Conclusion: The results presented in this study indicate the great potential of this essential oil as an alternative antimicrobial agent that can be used to control infectious diseases, especially against the *Candida* species that was found to be the most sensitive.

Keywords: *Hyssopus officinalis*, Essential oil, Antimicrobial activity.