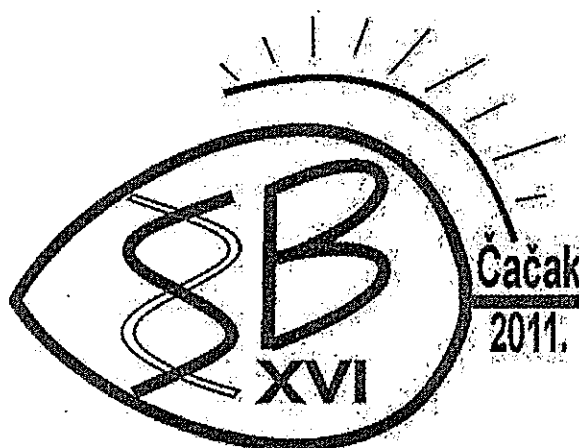




XVI SAVETOVANJE O BIOTEHNOLOGIJI

sa međunarodnim učešćem

- ZBORNIK RADOVA -



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BIOFLORA D.O.O ČAČAK

ANTIMICROBIAL ACTIVITIES OF CHLOROFORM, ETHYL ACETATE AND PETROLEUM ETHER EXTRACTS OF ENDEMIC PLANT SPECIES *Halacsya sendtneri* (L)

P. Mašković¹, Slavica Solujić², Jelena Mladenović¹, Milica Cvijović¹,
Gordana Vićentijević-Marković³, Goca Aćamović-Đoković¹

Abstract

This study was aimed at evaluating the antimicrobial activity and efficacy of the chloroform, ethyl acetate and petroleum ether extracts of the endemic plant species *Halacsya sendtneri* in inhibiting the development of selected fungi and bacteria. Antimicrobial activity was tested using broth dilution procedure for determination of minimum inhibitory concentration (MIC). The plant species extracts demonstrated important antimicrobial activity against 8 strains with MIC values from 16.62 to 62.50 µg/ml. The obtained results suggest that extract of the endemic species *Halacsya sendtneri* show antimicrobial activity.

Keywords: Antimicrobial activity, *Halacsya sendtneri*

Introduction

The use of traditional medicinal plants for primary health care and other purposes has progressively increased worldwide in recent years. Plants communicate with their environment by producing a diverse range of chemicals. These secondary metabolites are a common feature of specific plants and plant families. Many plant secondary metabolites have antimicrobial properties that make plant extracts and products successful in the treatment of bacterial, fungal and viral infections (Gottschling et al., 2001), (Zhou and Duan, 2005), (Iqbal et al., 2005). The different parts of plants (root, leaf, flower, fruit, stem, bark) are used to effectively treat a number of diseases. Their antioxidant and antimicrobial properties affect a range of physiological processes in the human body, thus providing protection against both free radicals and growth of undesirable microorganisms. The Boraginaceae family occurs worldwide, and it consists of about 100 genera with more than 2000 species (Josifović, 1970, 1977). Many members of the Boraginaceae family produce secondary metabolites such as alkaloids, naphthoquinones, polyphenols, phytosterols, terpenoids and fatty acids (Gottschling et al., 2001), (Zhou and Duan, 2005). Polyphenols, including flavonoids and phenolic acids, produced by the family Boraginaceae, have a wide range of pharmaceutical

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