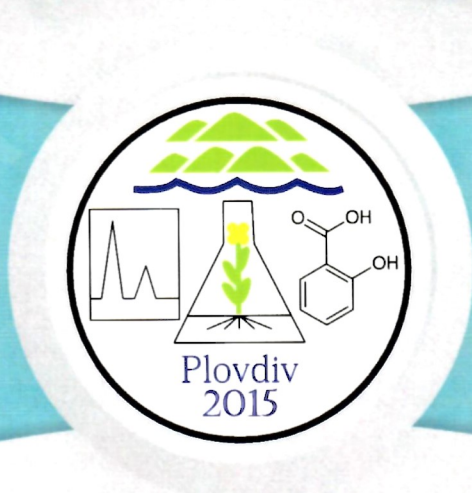
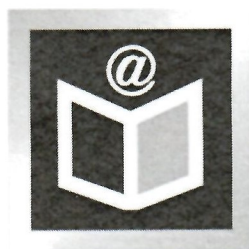


2nd INTERNATIONAL CONFERENCE ON
NATURAL PRODUCTS UTILIZATION:
FROM PLANTS TO
PHARMACY SHELF



14-17 October 2015
Plovdiv, BULGARIA

The 2nd International Conference on Natural Products
Utilization: from Plants to Pharmacy Shelf
(14–17 October, 2015), Plovdiv (Bulgaria)
is organized with the financial support of the
Ministry of Science and Education, Republic of Bulgaria



МИНИСТЕРСТВО НА
ОБРАЗОВАНИЕТО, МЛАДЕЖТА И НАУКАТА

Joint meeting with the Phytochemical Society of Europe
and Bulgarian Phytochemical Society

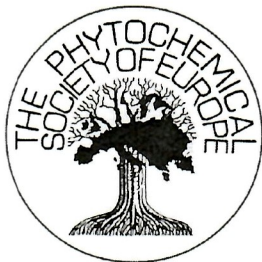


Illustration: Cover photo (*Haberlea rhodopensis*) provided courtesy of I. Aneva
Editor: Milen I. Georgiev, PhD

Dear ICNPU Participant

On behalf of the Organizing Committee we welcome you to the 2nd International Conference on Natural Products Utilization: from Plants to Pharmacy Shelf (ICNPU-2015) in Plovdiv, Bulgaria. The conference aims to cover the wide spectrum of natural products research on the sustainable use of natural resources, traditional knowledge, platforms and recent developments in natural products and biotechnology.

The Organizing Committee has organized ICNPU-2015 to feature keynote presentations and poster sessions. We invite you to share and discuss the latest developments in the field.

The conference is held in Plovdiv, the city of the seven hills – is a village as far as 4000 BC.

We hope you will enjoy the program.

Welcome to the ICNPU-2015!

Milen I. Georgiev, PhD
Chair of the Organizing Committee

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BIOACTIVITY OF SECONDARY METABOLITES FROM TRANSGENIC *ATCKX1* CENTAURY (*CENTAURIUM ERYTHRAEA* RAFN.) PLANTS GROWN *IN VITRO*

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Microbes causing numerous and the most diverse infections in humans worldwide. The increasing use of antibiotics and antifungal drugs has led to development of multidrug-resistant pathogens. Thus, there is a need for discovering novel and effective tools in control of pathogenic microorganisms. For many years plants represent important source of numerous chemical compounds. Common centaury, *Centaureum erythraea* Rafn. (syn. *C. umbellatum* Gillib and *C. minus* Moench), represent the best known and the most investigated medicinal plant species of genus *Centaureum*. Centaury has been used for centuries in traditional medicine. Secondary metabolites, bitter secoiridoid glucosides (gentiopicrin, swertiamarin and sweroside) and xanthenes (eustomin and demethyleustomin), are responsible for therapeutically properties of centaury. *AtCKX* transgenic centaury plants grown *in vitro* produced the same secondary metabolites as wild type centaury plants grown in nature. The aim of this study was to investigate antibacterial and antifungal activity of centaury methanol extracts and pure secoiridoid and xanthone compounds on four Gram positive, four Gram negative bacteria and eight species of microfungi. All tested methanol extracts of control and transgenic *AtCKX* centaury shoots and roots showed better antibacterial activity, while pure compounds (gentiopicrin, swertiamarin, eustomin and demethyleustomin) showed better antifungal activity. The results obtained in this work suggest that centaury methanol extracts and pure compounds represent potential antimicrobials confirming the possibility of using these compounds in agronomy, veterinary, medicine or food industry.

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TWO NEW PRENYLATED SESQUITERPENYL S

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Propolis is a natural product of bees. The increasing interest towards propolis active components, propolis from Pacific region became a new and unknown plant source. The chemical structure of propolis was determined for the first time. The stilbenes with an irregular structure (6) with four known compounds were isolated from propolis. The structures were determined based on comparison with literature data and identified. The propolis extract showed scavenging activity and sor

