

6th INTERNATIONAL CONFERENCE ON NATURAL PRODUCTS UTILIZATION

FROM PLANTS TO PHARMACY SHELF **27-30 May 2025**

Bansko BULGARIA



**BOOK OF
ABSTRACTS**





6th INTERNATIONAL CONFERENCE ON NATURAL PRODUCTS UTILIZATION: **FROM PLANTS TO PHARMACY SHELF**

ICNPU-2025, 27 - 30 May 2025

Dear ICNPU Participants:

On behalf of the Organizing Committee, it is an outstanding pleasure and honor to welcome you to the **6th International Conference on Natural Products Utilization: from Plants to Pharmacy Shelf (ICNPU-2025)**.

The **ICNPU** conference was established back in 2013 as a discussion platform for the most recent developments in the field of natural products. It aims to cover a wide spectrum of application of plants, with special emphasis on the sustainable use of natural products, omics platforms, and the recent trends in (ethno)pharmacology, toxicology, molecular biology, and biotechnology.

The **ICNPU-2025** takes place in Bansko, a popular winter resort in Bulgaria. Located at the foot of Pirin Mountains, with its incredible spirit and breathtaking landscapes, Bansko is definitely a place one should visit. Social activities include a welcome reception, conference dinner, excursion to Pirin Mountains, and a tour of historical monuments, besides the podium for informal discussions, networking opportunities and new insights.

We sincerely hope you will enjoy the scientific program and social activities.

Welcome to the **ICNPU family!**

Prof. Dr. Milen I. Georgiev
Chair of the Organizing Committee



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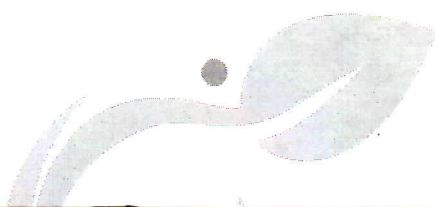
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Selcuk University (TR)



PROGRAMME

Monday, May 26, 2025

15:30 – 18:30 Registration

17:00 – 18:30 **Workshop**

Tuesday, May 27, 2025

08:30 – 18:30 Registration

09:00 – 18:30 Exhibition opening

09:00 – 09:30 **Official opening ceremony of ICNPU-2025**

09:30 – 10:15 **KL 1: Robert Verpoorte (NL)**

10:15 – 10:45 *Coffee break*

Session H

Chairs: Alipieva & Popova

10:45 – 11:20 **PL 1: Jean-Luc Wolfender (CH)**

11:20 – 11:35 **SL 1: Gordana Krstić (RS)**

11:35 – 11:50 **SL 2: Reneta Gevrenova (BG)**

11:50 – 12:05 **SL 3: Cătălin Duduianu (RO)**

12:05 – 12:20 **SL 4: Maria de Fátima Agra (BR)**

12:20 – 12:35 **SL 5: Rumén Denev (BG)**

12:35 – 13:00 **ICNPU-2025 group photo**

13:00 – 14:30 *Lunch break*

Session He

Chairs: Bankova & Dajic Stevanovic

14:30 – 14:55 **IL 1: Fabrizio Dal Piaz (IT)**

14:55 – 15:10 **SL 6: Miroslav Novaković (RS)**

15:10 – 15:25 **SL 7: Chen-Han Hsieh (DE)**

15:25 – 15:40 **SL 8: Dimitrina Zheleva-Dimitrova (BG)**

15:40 – 15:55 **SL 9: Yancho Zarev (BG)**

15:55 – 16:10 **SL 10: Nina Stadler (DE)**

16:10 – 16:25 **SL 11: Suchismita Saha (DE)**

16:25 – 16:50 *Coffee break*

Session Li

Chairs: Skalicka-Woźniak & Stefkov

16:50 – 17:15 **IL 2: Ilkay Orhan Erdogan (TR)**

17:15 – 17:30 **SL 12: Cornelia A. Karg (AT)**

17:30 – 17:45 **SL 13: Hassan Annaz (MA)**

17:45 – 18:00 **SL 14: Lucian Hritcu (RO)**

18:00 – 18:15 **SL 15: Praphassorn Surawattanawan (TH)**

18:15 – 18:30 **SL 16: Razvan Stefan Boiangiu (RO)**

18:30 – 20:30 **Poster session I**

20:30 – 22:30 **Get-together party**

Wednesday, May 28, 2025

08:00 – 18:30 Registration

08:30 – 18:30 Exhibition opening

Session Be Chairs: Sieniawska & Wolfender

09:00 – 09:25 **IL 3: Simone Moser (AT)**

09:25 – 09:50 **IL 4: Krystyna Skalicka-Woźniak (PL)**

09:50 – 10:05 **SL 17: Rositsa Mihaylova (BG)**

10:05 – 10:20 **SL 18: Davide Ciaramellano (IT)**

10:20 – 10:35 **SL 19: Quanyong Wu (ES)**

10:35 – 10:50 **SL 20: Angelica Pia Centulio (IT)**

10:50 – 11:20 *Coffee break*

Session B Chairs: Orhan & Moser

11:20 – 11:45 **IL 5: Francesca Giampieri (IT)**

11:45 – 12:10 **IL 6: Georgi Momekov (BG)**

12:10 – 12:25 **SL 21: Partha Roy (IN)**

12:25 – 12:40 **SL 22: Yuxuan Zhao (CN/ES)**

12:40 – 12:55 **SL 23: Balasubramanian Vairappan (IN)**

13:00 – 14:30 *Lunch break*

Session C Chairs: Zheleva-Dimitrova & Ferrante

14:30 – 14:55 **IL 7: José L. Quiles (ES)**

14:55 – 15:10 **SL 24: Ioannis P. Trougakos (GR)**

15:10 – 15:25 **SL 25: Gianluca Picariello (IT)**

15:25 – 15:40 **SL 26: Gianluca Genovesi (IT)**

15:40 – 15:55 **SL 27: Ivan Stambolov (BG)**

15:55 – 16:10 **SL 28: Syed Ghulam Musharraf (PK)**

16:10 – 16:25 **SL 29: Liliya V. Mihaylova (BG)**

16:25 – 16:55 *Coffee break*

Session N Chairs: Trougakos & Czerwińska

16:55 – 17:20 **IL 8: Eleni Skaltsa (GR)**

17:20 – 17:35 **SL 30: Stefan Kolašinac (RS)**

- 17:35 – 17:50 **SL 31: Anna Szakiel** (PL)
 17:50 – 18:05 **SL 32: Lora Simeonova** (BG)
 18:05 – 18:20 **SL 33: Danijela Mišić** (RS)
 18:20 – 18:35 **SL 34: Annalisa Chiavaroli** (IT)
 18:35 – 18:50 **SL 35: Kaloyan Mihalev** (BG)
 18:50 – 19:05 **SL 36: Jingyimei Liang** (CN/ES)
 19:15 – 21:15 **Poster session II**

Thursday, May 29, 2025

- 09:00 – 18:00 Registration
 09:00 – 18:00 Exhibition opening

Session O Chairs: Capanoglu & Orlando

- 09:00 – 09:25 **IL 9: Chin-Kun Wang** (TW)
 09:25 – 09:40 **SL 37: Monika E. Czerwińska** (PL)
 09:40 – 09:55 **SL 38: Elwira Sieniawska** (PL)
 09:55 – 10:10 **SL 39: Igljika Lessigiarska** (BG)
 10:10 – 10:25 **SL 40: Adriana C. S. Pais** (PT)
 10:25 – 10:40 **SL 41: Pille-Riin Laanet** (EE)
 10:40 – 11:10 *Coffee break*

Session F Chairs: Santos & Atanassov

- 11:10 – 11:45 **PL 2: Esra Çapanoğlu Güven** (TR)
 11:45 – 12:00 **SL 42: Pan Liao** (HK/CN)
 12:00 – 12:15 **SL 43: Adam Matkowski** (PL)
 12:15 – 12:30 **SL 44: Fenita Hephzibah D** (IN)
 12:30 – 12:45 **SL 45: Olga Gigopulu** (MK)
 12:45 – 13:00 **SL 46: Amit Faran** (IL)
 13:00 – 14:30 *Lunch break*

Session Ne Chairs: Matkowski & Yordanova

- 14:30 – 14:55 **IL 10: Zora Dajić Stevanović** (RS)
 14:55 – 15:10 **SL 47: Ivan Atanassov** (BG)
 15:10 – 15:25 **SL 48: Krasimir Rusanov** (BG)
 15:25 – 15:40 **SL 49: Marco Biagi** (IT)
 15:40 – 15:55 **SL 50: Vessela Balabanova** (BG)

15:55 – 16:10 **SL 51: Ivica Dimkić (RS)**

16:10 – 16:30 *Coffee break*

Session Na

Chairs: Liao & Mah

16:30 – 16:55 **IL 11: Jianbo Xiao (ES)**

16:55 – 17:10 **SL 52: Gjoshe Stefkov (MK)**

17:10 – 17:25 **SL 53: Valtcho D. Zheljazkov (USA)**

17:25 – 17:40 **SL 54: Marcos Soto-Hernandez (MX)**

17:40 – 17:55 **SL 55: Mohanlal Ghosh (IN)**

17:55 – 18:10 **SL 56: Partha Palit (IN)**

18:10 – 18:25 **SL 57: Thomas Brendler (USA/AU/ZA)**

18:25 – 18:40 **SL 58: Hui Cao (ES)**

18:40 – 18:50 **Closing ICNPU-2025 & awards**

20:00 – 00:00 **ICNPU-2025 dinner**

Friday, May 30, 2025

09:00 – 14:00 **Conference excursion**

KL – key-note lecture

PL – plenary lecture

IL – invited lecture + 5 min Q&A to invited oral slots

SL – short lecture (+3 min Q&A)

PRODUCTION OF DIETARY SUPPLEMENT BASED ON HONEY AND BILBERRY POMACE

**Katarina Šavikin, Nada Čujić, Gordana Zdunić, Jelena Živković,
Dejan Pljevljakušić, Dubravka Bigović**

*Institute for medicinal plants research "Dr Josif Pančić", Tadeuša Koščuška 1,
11000 Belgrade, Serbia*

The aim of the study was to obtain a high-quality dietary supplement based on honey and bilberry pomace obtained after juice pressing. Formulation included optimization of the lyophilization process of bilberry pomace by varying the length of freezing, pressure, duration of lyophilization; chemical characterization in order to select sample that contains the highest amount of anthocyanins; selection of the type of honey and percent of bilberry through different trial formulations in order to achieve the best sensory and technological properties as well as the stability of the product. Freezing for 24 h at -85°C ; main drying at -50°C , $p = 0.04$ mbar and final drying: -75°C , $p = 0.0012$ mbar was chosen as optimal. Optimal bilberry sample was dark purple, homogeneous powder with 2.31% total anthocyanins and 42.28 mg GAE/g total phenolics. According to HPLC, the most abundant anthocyanins were delphinidin 3-glucoside (0.37 mg/g) and cyanidin-3-O-glucoside (0.29 mg/g). Selected parameters for final product were acacia honey, 7% lyophilizate of bilberry pomace, mixing for 30 min in a mixer, and then passing through a colloidal mill. Product characteristics were: thick homogeneous purple mass with a pleasant sweet taste, total anthocyanins content of 0.14% and 23.36 mg GAE/g of total phenolics, microbiologically and organoleptically stabile under different storage conditions i.e. in a thermostat at 37°C for 6 months; at room temperature for 12 months and under stressful conditions (24 hours shift of exposure to 40°C in the thermostat and 4°C in the refrigerator, 8 cycles). Average decrease in total anthocyanins was 13.6% and 4.1% in total phenolics.

Acknowledgements: COST action CA22105 - BEEkeeping products valorization and biomonito-ring for the SAFETY of BEEs and HONEY (BeSafeBeeHoney).