



4TH EUROPEAN SYMPOSIUM ON PHYTOCHEMICALS IN MEDICINE AND FOOD

**June 30 – July 3, 2026
Aveiro, Portugal**

BOOK OF ABSTRACTS



The 4th European Symposium on Phytochemicals in Medicine and Food (June 30 – July 3, 2026), Aveiro (Portugal), is organized with the kind support of the following organizations and entities:

PARTNERS



universidade de aveiro
theoria poiesis praxis



Phytochemical Society of Europe



ORGANIZING PARTNERS



SPONSORS





4TH EUROPEAN SYMPOSIUM ON PHYTOCHEMICALS IN MEDICINE AND FOOD

June 30 – July 3, 2026 - Aveiro, Portugal

Dear 4th EuSPMF,

We are pleased to welcome you to the 4th European Symposium on Phytochemicals in Medicine and Food (4th EuSPMF). The exploitation of phytochemicals for the promotion of human health and well-being has been growing exponentially in recent years, driven by high-quality scientific research, strong networks between research institutions and industry, and effective knowledge transfer. The 4th EuSPMF aims to serve as a venue for fostering research collaborations, exchanging innovative ideas, and addressing current challenges in the field, bringing together researchers and professionals from around the world, contributing to new solutions for society.

We look forward to a fruitful and inspiring scientific event in Aveiro.

The organization has the local support of the University of Aveiro, the Department of Chemistry and CICECO -Aveiro Institute of Materials.

With our best regards,

Prof Sónia A.O. Santos

On behalf of the Organizing Committee

Table of Contents

Organizing Committee.....	II
Programme.....	IV
Plenary Lectures.....	1
Keynote Lectures	8
Oral presentations	23
Young Scientist Presentations	53
Poster presentations.....	90

Organizing Committee

Chair

Prof. Sónia A. O. Santos

CICECO – Aveiro Institute of Materials and Department of Chemistry,
University of Aveiro (PT)

Co- Chairs

Dr. Adriana C. S. Pais

University of Aveiro (PT)

Prof. Luigi Milella

University of Basilicata (IT)

Prof. Ana Sanches-Silva

University of Coimbra (PT)

Prof. Milen Georgiev

Bulgarian Academy of Sciences (BG)

Prof. Armando J. D. Silvestre

University of Aveiro (PT)

Dr. Hui Cao

University of Vigo (ES)

Scientific Committee

Prof. Sónia A. O. Santos

University of Aveiro (PT)

Prof. Jianbo Xiao

University of Vigo (ES)

Prof. Armando J. D. Silvestre

University of Aveiro (PT)

Prof. Lucindo José Quintans Júnior

Federal University of Sergipe (BR)

Dr. Hui Cao

University of Vigo (ES)

Prof. Jackson R. Guedes da Silva Almeida

Federal University of São Francisco Valley (BR)

Prof. Beraat Özçelik

Istanbul Technical University (TR)

Prof. Pierre-Eric Campos

University of Orléans (FR)

Prof. Elwira Sieniawska

Medical University of Lubin (PL)

Prof. Célia Vargas-de-la-Cruz

Universidad Nacional Mayor de San Marcos
(PE)

Prof. Marina Kritsanida

University of Paris (FR)

Prof. Simone Moser

University of Innsbruck (AT)

Prof. Luigi Milella

University of Basilicata (IT)

Prof. Simon Vlad Luca

University of Orléans (FR)

Prof. Milen Georgiev

Bulgarian Academy of Sciences (BG)

Dr. Adriana C. S. Pais

University of Aveiro (PT)

Local Organizing Committee

Ana Clara Jacinto

Ana Rita Ferreira

Daniela Resende

Lou Zsusatz

Mariana Kergoustin

Samuel Patinha

UbaidUllah

Beatriz Loureiro

Irene Pasero

Carolina Lopes

Mafalda Santiago

Carolina Sousa

Pedro Ferreira

Sofia Morais

Programme

Monday, June 29th

12am – 2pm: Registration

Workshops

2pm – 3pm: “Multidimensional chromatography and mass spectrometry: tools for future challenges”

4pm – 5:30pm: “Smart Science: Using Artificial Intelligence in Research”

From 6:30pm: *Sunset by the sea*

Tuesday, June 30th

From 8:00am: Registration

8:45am – 9:45am: Opening Session of 4th EuSPMF

SESSION 1 - Chairs: Prof. Luigi Milella and Prof. Jelena Popovic

9:45am - PL1: Prof. Milen I. Georgiev

10:30am – KL1: Prof. Hye-Kyung Na

11:00am – 11:30am: Coffee break and Poster session I (PP1 – PP21)

SESSION 2 - Chairs: Prof. Giuseppe Grosso and Prof. Beraat Özçelik

11:30am – KL2: Prof. Raimundo Gonçalves de Oliveira Junior

12:00pm – OP1: Dr. Izabela Nawrot-Hadzik

12:15pm – OP2: Prof. Dr. Ming-Quan Guo

12:30pm – OP3: Dr. Deghima Amirouche

12:00pm – 12:45pm: Young Scientist parallel session

YSP1: Rosana Tajra

YSP2: Mariana Kergoustin

YSP3: Xincheng Wu

YSP4: Daniela Resende

12:45pm – 2:30pm: Lunch

SESSION 3 - Chairs: Prof. Esra Capanoglu and Prof. Jianbo Xiao

2:30pm – PL2: Prof Maurizio Battino

3:15pm – KL3: Prof. Elwira Sieniawska

3:45pm – OP4: Dr. Giorgio Cappellucci

4:00pm – OP5: Prof. Jihang Chen

3:45pm – 4:15pm: Young Scientist parallel session

YSP5: Lu Wang

YSP6: Jingyimei Liang

4:15pm – 4:45pm: Coffee break and Poster session I (PP1 – PP21)

SESSION 4 - Chairs: Prof. Raimundo Gonçalves de Oliveira Júnior and Prof.
Francesca Giampieri

4:45pm – KL4: Prof. Ipek Süntar

5:15pm – OP6: Dr. Giuseppe T Patanè

5:30pm – OP7: Dr. Ludovica Lela

5:15pm – 5:45pm: Young Scientist parallel session

YSP7: Wenqi Huang

YSP8: Ouyang Boya

YSP9: Quanyong Wu

5:45pm – KL5: Prof. Lucindo Quintans

From 6:15pm: Welcome Cocktail Reception and 4th EUSPMF Group Photo

Wednesday, July 1st

From 8:00am: Registration

SESSION 5 - Chairs: Prof. Ana Sanches Silva and Prof. Milen I Georgiev

9:00am – PL3: Prof. Jianbo Xiao

9:45am – OP8: Dr. Carmina Sirignano

10:00am – OP9: Prof. Giuseppe Antonio Malfa

10:15am – OP10: Dr. Alessandro Maugeri

10:30am – OP11: Prof. Alberto Dias

9:45am – 10:45am: *Young Scientist parallel session*

YSP10: Helena Todorovic

YSP11: Sims K. Lawson

YSP12: Wanning Ma

YSP13: Fei Liu

YSP14: Inês S. L. Farias

YSP15: Shiye Lin

10:45am – 11:15am: Coffee break and Poster session II (PP22 – PP48)

SESSION 6 - Chairs: Prof. Ipek Süntar and Prof. Lucindo Quintans

11:15am – KL6: Prof Nazim Sekeroglu

11:45am – OP12: Dr. Tânia Moniz

12:00pm – OP13: Dr. Jolanta Sereikaitė

11:45am – 12:15pm: *Young Scientist parallel session*

YSP16: Mafalda Santiago

YSP17: Irene Pasero

YSP18: Yuxuan Zhao

12:15pm – KL7: Prof. Giuseppe Grosso

12:45pm – 2:30pm: Lunch

SESSION 7 - Chairs: Prof. Susana Cardoso and Prof. Maurizio Battino

2:30pm – KL8: Prof. Beraat Özçelik

3:00pm – OP14: Dr. Joanna Oracz

3:15pm – OP15: Dr. Vittorio Carlucci

3:30pm – OP16: Prof. Balasubramaniyan Vairappan

3:00pm – 3:45pm: Young Scientist parallel session

YSP19: Elizabeth Figueroa Valencia

YSP20: Eliana Fernandes

YSP21: Pengren Zou

3:45pm – KL9: Prof. Dr. Hui Cao

4:15pm – 4:45pm: Coffee break and Poster session II (PP22 – PP48)

SESSION 8 - Chairs: Prof. Nazim Sekeroglu and Dr. Adriana C. S. Pais

4:45pm – KL10: Prof. Jelena Popovic

5:15pm – OP17: Prof. Andrea Gomez-Zavaglia

5:30pm – OP18: Dr. Paula Garcia Oliveira

5:45pm – KL11: Prof. Jackson Almeida

Parallel Session

4:45pm – 6:15pm: Workshop “From Structure to Binding: Molecular Docking Workshop”

Thursday, July 2nd

From 8:00am: Registration

SESSION 9 - Chairs: Prof. Laurent Picot and Prof. Luisa Custódio

8:45am – PL4: Prof Jean-Luc Wolfender

9:30am – KL12: Prof. Francesca Giampieri

10:00am – OP19: Dr. Gabriela Kowalska

10:15am – OP20: Dr. Giulia Baini

10:00am – 10:30am: Young Scientist parallel session

YSP22: Emanuele Rosa

YSP23: Ana R. Circuncisão

YSP24: Ana Clara Jacinto

10:30am – 11:00am: Coffee break and Poster session III (PP49 – PP71)

SESSION 10 - Chairs: Prof. Armando Silvestre and Prof. Elwira Sieniawska

11:00am – KL13: Dr. Ana C. Q. Silva

11:30am – OP21: Prof. Susana Cardoso

11:45pm – OP22: Dr. Anna Stasiłowicz-Krzemień

11:30am – 12:00pm: Young Scientist parallel session – Chair:

YSP25: Lou Zusatz

YSP26: Ana Rita Ferreira

YSP27: Inês Amaro

12:00pm – PL5: Prof. Esra Capanoglu

12:45pm – 2:15pm: Lunch

2:15pm – 2:30pm: Poster session III (PP49 – PP71)

SESSION 11 - Chairs: Prof. Nikolay T. Tzvetkov and Prof. Hye-Kyung Na

2:30pm – KL14: Prof. Luísa Custódio

3:00pm – OP23: Dr. Adriana C. S. Pais

3:15pm – OP24: Prof. Mi Kyeong Lee

3:30pm – OP25: Dr. Maria João Rodrigues

3:45pm – PL6: Prof. Laurent Picot

4:30pm – 5:15pm: *Awards and Closing Ceremony*

From 6:30pm – Conference Dinner

Friday, July 3rd

9:00am – 15:30pm: Aveiro Tour

From 15:30pm – Porto Wine Cellars and dinner on the Douro River



KEYNOTE LECTURES





KL10

From traditional to functional jelly formulations: utilization of black raspberry pomace extract

Jelena Popović-Djordjević¹, Katarina Šavikin², Nikola Tomić¹, Olgica Nedić³

¹ University of Belgrade, Faculty of Agriculture, Belgrade, Serbia

² Institute for Medicinal Plants Research "Dr. Josif Pančić", Tadeuša Koščuška 1, Belgrade, Serbia

³ Institute for the Application of Nuclear Energy (INEP), University of Belgrade, Belgrade, Serbia

✉ jelenadj@agrif.bg.ac.rs; ORCID: 0000-0003-4057-3826

Black raspberry (*Rubus occidentalis*) is a rich source of anthocyanins, particularly cyanidin derivatives, along with ellagitannins [1]. A renewed interest in black raspberry, not only for its unique flavor but also for characteristics associated with health and sensory quality in preparation of functional food is notable [2]. Creation of low-sugar black raspberry products, such as jellies with refined sugar substitutes, is one direction of functional food production.

For this purpose, four jelly formulations enriched with 3% of black raspberry pomace (BRP) extract were developed; PS-pectin/sucrose; GS-gelatin/sucrose; PI-pectin/inulin; GI-gelatin/inulin, as well as four control samples. All samples were examined for their phytochemical composition (total phenolic content-TPC and total anthocyanin content - TAC), functional characteristics (*in vitro* antioxidant and antidiabetic activities) and sensory attributes. HPLC was used for quantitative analysis of the main anthocyanins (cyanidin-3-O-glucoside, cyanidin-3-O-rutinoside and cyanidin-3-O-sambubioside).

The results indicated that TPC and TAC were higher in samples with inulin (GI and PI) compared to those with sucrose. The antioxidant activity measured by DPPH[•] and ABTS^{•+} assays was significantly different between samples enriched with BRP ($p < 0.05$), while samples with inulin (GI and PI) did not show significant differences compared to jellies with sucrose in FRAP assay ($p > 0.05$). The samples showed no significant differences toward α -amylase inhibition (IC_{50} -3.41-3.61 mg/mL), with exception of control pectin/inulin (CPI) sample which expressed significantly lower activity compared to other samples ($p < 0.05$). On the other hand, only pectin-based jelly formulation PI showed inhibitory potential toward α -glucosidase enzyme (IC_{50} -0.82 $\pm$ 0.02 mg/mL).

For sensory evaluation, 16 sensory attributes were assessed, showing significant discrimination among the samples. The gelling agents influenced perceptual differences between the formulations in terms of texture and appearance, while the flavor attributes were mainly affected by the sweetening ingredients used. The results of the study showed that enriching jelly with anthocyanins as well as the choice of gelling agent and sweetener can help to obtain a healthier option for consumers.

References

[1] Krgović N, et al., *Ind Crop Prod* 2025, 223:120237

[2] Toshima S, et al., *Sci Hortic-Amsterdam*, 2021, 285:110204

Acknowledgement: Authors acknowledge the Ministry of Science, Technological Development, and Innovation of the Republic of Serbia for financial support (Grant Nos. 451-03-33/2026-03/200003, 451-03-34/2026-03/200116 and 451-03-34/2026-03/200135).