

# 13<sup>th</sup> HPBB Conference Programme



## International Conference on High Pressure Bioscience and Biotechnology

**HPBB 2026**

**Conference Venue:** University of Aveiro (*Complexo Pedagógico*)

**Google Maps:** <https://maps.app.goo.gl/EMpiCwBkKyKRdhrs8>

**Baidu Maps:** [https://j.map.baidu.com/99/Tn\\_k](https://j.map.baidu.com/99/Tn_k)

**Aveiro, 31 August – 3 September 2026**



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## 13<sup>th</sup> HPBB Conference Programme

### August 31<sup>st</sup> (Monday)

#### 17h00 – 20h00 Registration

**Pre-meeting-welcome-get-together and visit to the high pressure facilities at the University of Aveiro** (includes degustation of several high pressure pasteurized foods and in loco showcasing demonstrations of high pressure applications)

Near the Café da Universidade de Aveiro, CUA

Google Maps location: <https://maps.app.goo.gl/rxs1jCCNVbxraDsm7>

### September 1<sup>st</sup> (Tuesday)

#### 8h30 Registration

#### 9h00 – 09h30 Conference opening

**Jorge Manuel Alexandre Saraiva**, Conference Chair

**Artur Manuel Soares da Silva**, Rector of the University of Aveiro

**Armando Jorge Domingues Silvestre**, Director of the Chemistry Department of the University of Aveiro

#### Food Science under High Pressure – Session 1

Chair: Kazutaka Yamamoto

**09h30 – 10h15 Keynote 1:** Pressure effects on non-enzymatic reaction kinetics in food systems: from degradation mechanisms to stabilization strategies

*Avi Shpigelman (Technion, Israel)*

#### 10h15 – 10h45 Coffee-break and Poster session

#### Food Science under High Pressure – Session 2

Chair: Carlos A. Pinto

**10h45 – 11h05 O1:** Watermelon juice preservation by moderate pressure pasteurization at room temperature

*Vasco Lima (Faculty of Biotechnology, Catholic University of Porto, Portugal)*

**11h05 – 11h25 O2:** Effect of high pressure processing on microbial inactivation and stability of strawberry tree juice during refrigerated storage

*Enrique Pino-Hernández (TagusValey, Portugal)*

**11h25 – 11h45 O3:** Validation of *Listeria innocua* UBU as a surrogate for *Listeria monocytogenes* in meat products treated by high pressure processing (HPP)

*Rui Queirós (Hiperbaric S.A., Spain)*

**11h45 – 12h05 O4:** High pressure processing for milk safety and subsequent yogurt fermentation

*Nicole Moreira (University of Aveiro, Portugal)*

#### 12h15 – 14h00 Lunch

*University of Aveiro Restaurant*

Google Maps location: <https://maps.app.goo.gl/MYP8ZPMNYWetqAQ29>

### Food Science under High Pressure – Session 3

Chair: Jorge A. Saraiva

- 14h00 – 14h20 Golden sponsor presentation** - Commercial & Future Applications of High Pressure for Food  
*Carole Tonello (Hiperbaric S.A., Spain)*
- 14h20 – 14h40 O5:** Effect of NaCl on the syneresis of egg white gel solidified by high hydrostatic pressure  
*Kazutaka Yamamoto (Institute of Food Research, NARO, Japan)*
- 14h40 – 15h00 O6:** Impact of High Pressure Processing Pre-treatments on Physicochemical, Sensory and Microbiological Quality of Freeze-Dried Beetroot Snacks  
*Telma Orvalho (TagusValey, Portugal)*
- 15h00 – 15h20 O7:** Effects of two pressure-based pasteurizations and packaging atmosphere on lipid oxidation of smoked salmon  
*Alireza Mousakhani Ganjeh (University of Aveiro, Portugal)*
- 15h30 – 16h00 Coffee-break and Posters session**

### Food Science under High Pressure – Session 4

Chair: Carole Tonello

- 16h00 – 16h20 O8:** Changes in Quality-Related Compounds in Purple Carrot Juice after High-Pressure Thermal Sterilization Treatments by PESI-MS/MS Analysis  
*Miho Kakui (Kakui Food Co.,LTD, Japan)*
- 16h20 – 16h40 O9:** Effect of HHP treatment for the preservation of the olive pomace of the Morisca cultivar as a food additive  
*María Cabeza de Vaca (Centro de Investigaciones Científicas y Tecnológicas de Extremadura, Spain)*
- 16h40 – 17h00 O10:** Effects of sodium chloride and osmotic conditions on the barotolerance of *Staphylococcus aureus* under high hydrostatic pressure treatment  
*Satomi Tsutsuura (Niigata University, Japan)*
- 17h00 – 18h30 Sunset refreshment cocktail**  
*University of Aveiro Restaurant*  
Google Maps location: <https://maps.app.goo.gl/MYP8ZPMNYWetqAQ29>

September 2<sup>nd</sup> (Wednesday)

8h30 Registration

## Cells and Organisms and Biotechnology Applications under High Pressure – Session 1

Chair: Roland Winter

9h00 – 09h45 **Keynote 2:** Activation of cell motility measured by high-pressure microscopy  
*Masayoshi Nishiyama (KINDAI University, Japan)*

09h45 – 10h05 **O11:** Room temperature hyperbaric storage of human adipose derived stem cells as a potential alternative to cryopreservation  
*Ana P. Martins (University of Aveiro, Portugal)*

10h15 – 10h45 Coffee-break and Poster session

## Cells and Organisms and Biotechnology Applications under High Pressure – Session 2

Chair: Werner Kremer

10h45 – 11h05 **O12:** Development of high pressure transformation of the haloalkaliphilic archaeon *Natronomonas pharaonis*  
*Emma Bonnaud (INSAVALOR, France)*

11h05 – 11h25 **O13:** Membrane adaptation to high pressure involves bulk lipid transfer at ER-PM contact sites  
*Fumiyoshi Abe (Aoyama Gakuin University, Japan)*

11h25 – 11h45 **O14:** Expanding the Pressure Frontier in Gruneisen Parameter Measurement  
*Jun Kong (Center for High Pressure Science and Technology Advanced Research, China)*

11h45 – 12h05 **O15:** High pressure for the manufacture of devitalized cellular biomaterials  
*Íris Alves (University of Aveiro, Portugal)*

12h05 – 12h15 **Conference photo**  
*Complexo Pedagógico at the University of Aveiro*

12h30 – 14h00 **Lunch**  
*University of Aveiro Restaurant*  
 Google Maps location: <https://maps.app.goo.gl/MYP8ZPMNYWetqAQ29>

15h00 – 16h15 **Social programme**  
 Traditional *Moliceiro* boat tour through the channels of Aveiro  
 Google Maps Location: <https://maps.app.goo.gl/iwUUG2RLBDdzpgKv6>

16h15 – 19h00 **Free time**  
*Explore the beautiful city of Aveiro (see main touristic spots in the QR CODE)*

20h00 – 23h00 **Conference dinner**  
*University of Aveiro Restaurant*  
 Google Maps location: <https://maps.app.goo.gl/MYP8ZPMNYWetqAQ29>



## September 3<sup>rd</sup> (Thursday)

### Structure, Dynamics and Function of Biomacromolecules under High Pressure – Session 1 Chair: Masayoshi Nishiyama

**09h00 – 09h45 Keynote 3:** Biomolecules under Stress - Life under Extreme Conditions  
*Roland Winter (TU Dortmund University, Germany)*

**09h45 – 10h05 O16:** Insights into the Structure of Invisible Conformations of Large Methyl Group Labelled Molecular Machines from High Pressure NMR  
*Werner Kremer (University of Regensburg, Germany)*

**10h15 – 10h45 Coffee-break and poster session**

### Structure, Dynamics and Function of Biomacromolecules under High Pressure – Session 2 Chair: Fumiyoshi Abe

**10h45 – 11h05 O17:** Influence of high hydrostatic pressure pretreatment on the extractability and composition of citrus pectin  
*Brian Macias Frotto (Tecnologico de Monterrey, Mexico)*

**11h05 – 11h25 O18:** Adaptation to high salinity: Response of bacterial model membranes to Martian deep subsurface conditions  
*Attila Tortorella (TU Dortmund University, Germany)*

**11h30 – 11h45 Presentation of next HPBB**

**11h45 – 12h00 Conference closing and farewell**

## Poster communications

Posters are available for viewing during the Conference.

### Cells and Organisms and Biotechnology Applications under High Pressure

- P1:** High hydrostatic pressure enhances cardiomyocyte contraction by regulating intracellular Ca<sup>2+</sup> dynamics  
*Masayoshi Nishiyama (KINDAI University, Japan)*

### Food Science under High Pressure

- P2:** High Hydrostatic Pressure Treatment on White Winemaking Lees (cv. Alarije)  
*Ana María López Valenzuela (Centro de Investigaciones Científicas y Tecnológicas de Extremadura, Spain)*
- P3:** Effect of High Hydrostatic Pressures on Red Winemaking Lees (cv. Tempranillo)  
*Ana María López-Valenzuela (Centro de Investigaciones Científicas y Tecnológicas de Extremadura, Spain)*
- P4:** High Hydrostatic Pressure (HHP) as a Preservation Strategy for Frankfurters Enriched with Grape Pomace  
*M. J. Martín-Mateos (Centro de Investigaciones Científicas y Tecnológicas de Extremadura, Spain)*
- P5:** Application of high-pressure hydrostatic technologies and skin packaging for the preservation of ready-to-eat lamb meat dishes  
*M.J. Martín-Mateos (Centro de Investigaciones Científicas y Tecnológicas de Extremadura, Spain)*
- P6:** White wine pomace treated by hydrostatic high pressure: phenolic profile and changes during storage  
*M.R. Ramírez-Bernabé (Centro de Investigaciones Científicas y Tecnológicas de Extremadura, Spain)*
- P7:** Effect of HHP treatment for the preservation of the olive pomace of the Picual cultivar as a food additive  
*María Cabeza de Vaca Molina (Centro de Investigaciones Científicas y Tecnológicas de Extremadura, Spain)*
- P8:** Effect of HHP processing strategy (cycles vs continuous treatment) on colour and microbial stability of lamb burgers  
*Miriam Sánchez Ordóñez (Centro de Investigaciones Científicas y Tecnológicas de Extremadura, Spain)*
- P9:** Effect of high hydrostatic pressure on microbial inactivation and functional compounds in red pepper by-products  
*Miriam Sánchez Ordóñez (Centro de Investigaciones Científicas y Tecnológicas de Extremadura, Spain)*
- P10:** Valorisation of chilli peppers by-products using high-pressure as an extraction technology  
*Jéssica Tavares (University of Aveiro, Portugal)*
- P11:** Hyperbaric storage at room temperature of raw poultry meat as a novel preservation methodology compared to refrigeration  
*Jéssica Tavares (University of Aveiro, Portugal)*
- P12:** Optimization of the extraction process of chilli peppers by-products using high-pressure  
*Gabriela Matos (University of Aveiro, Portugal)*
- P13:** Preservation of egg white at room temperature by hyperbaric storage: impact on volatile profile and sensory attributes  
*Gabriela Matos (University of Aveiro, Portugal)*

**P14:** Food Safety Assessment of Almond Ice Cream Formulated with Liquid Fresh Whey: Comparison between High Pressure Processing and Thermal Pasteurization

*Viviana Monteiro (TagusValey, Portugal)*

**P15:** Antioxidant and antimicrobial activities of seaweed extracts obtained by high-pressure assisted extraction

*Andreia Miranda (Instituto Politécnico de Leiria, Portugal)*