

13th HPBB Conference Programme



International Conference on High Pressure Bioscience and Biotechnology

HPBB 2026

Conference Venue: University of Aveiro (*Edifício Central e da Reitoria*)

Google Maps: <https://maps.app.goo.gl/zdSxMRjJpY6D2Cbv6>

Baidu Maps: <https://j.map.baidu.com/3d/mYWk>

Aveiro, 31 August – 3 September 2026



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13th HPBB Conference Programme

August 31st (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 1st (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 2nd (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 treatment of cellular assemblies towards stable therapeutic products
Mariana Oliveira (University of Aveiro, Portugal)

12h05 – 12h15 **Conference photo**
Edifício Central e da Reitoria 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 3rd (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 Ca²⁺ 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:** 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)
- P7:** 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)
- P8:** 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)
- P9:** Valorisation of chilli peppers by-products using high-pressure as an extraction technology
Jéssica Tavares (University of Aveiro, Portugal)
- P10:** Hyperbaric storage at room temperature of raw poultry meat as a novel preservation methodology compared to refrigeration
Jéssica Tavares (University of Aveiro, Portugal)
- P11:** Optimization of the extraction process of chilli peppers by-products using high-pressure
Gabriela Matos (University of Aveiro, Portugal)
- P12:** Preservation of egg white at room temperature by hyperbaric storage: impact on volatile profile and sensory attributes
Gabriela Matos (University of Aveiro, Portugal)
- P13:** Food Safety Assessment of Almond Ice Cream Formulated with Liquid Fresh Whey: Comparison between High Pressure Processing and Thermal Pasteurization
Viviana Monteiro (TagusValey, Portugal)

P14: Antioxidant and antimicrobial activities of seaweed extracts obtained by high-pressure assisted extraction
Andreia Miranda (Instituto Politécnico de Leiria, Portugal)