



12TH EUROPEAN SYMPOSIUM ON BIOPOLYMERS

LISBON, PORTUGAL

1st – 3rd October 2025

PROGRAMME





WEDNESDAY | 1ST OF OCTOBER 2025

08:00–08:45	Conference Registration
08:45–09:00	Welcome Session
09:00–09:45	Section #1 Biopolymers production Plenary Lecture #1 – Shunsuke Sato <i>KANEKA Biodegradable polymer Green Planet ® From CO₂ as a carbon source</i>
09:45–10:15	Keynote #1 – Mark van Loosdrecht <i>Production of Biopolymers from wastewater opportunities and bottlenecks</i>
10:15–10:30	T1.1 – <u>Lucie Schneider</u> , Polyhydroxyalkanoates with controlled monomer composition and distribution for the development of medical devices
10:30–10:45	T1.2 – <u>João Carvalho</u> , Isolation and screening for purple phototrophic bacteria with increased polyhydroxyalkanoates productivity
10:45–11:00	T1.3 – <u>Stanislav Obruča</u> , Some Like It Hot: Exploring Thermophiles for PHA Biosynthesis
11:00–11:30	Coffee Break & Poster Session
11:30–12:00	Keynote #2 – Jochen Schmid <i>Biopolymer production: harnessing the structural diversity of microbial exopolysaccharides for various applications</i>
12:00–12:15	T1.4 – <u>Carlota Ucha Muñoz</u> , Preservation and reactivation of a stored mixed microbial culture for PHA production
12:15–12:30	T1.5 – <u>Ebru Toksoy Öner</u> , Exopolysaccharides of Polyestremophiles: Adaptation to multiple extremes
12:30–12:45	T1.6 – <u>Lara Santolin</u> , <i>Ralstonia eutropha</i> 's PhaR – A transcriptional factor with ambivalent role
12:45–13:00	T1.7 – <u>Karel Sedlar</u> , Genes and Genomes coding PHA Synthases
13:00–13:15	Flash presentations
13:15–14:15	Lunch & Poster Session
14:15–15:00	Section #2 Advanced Tools on Biopolymers Plenary Lecture #2 – Moritz von Stosch <i>How biopolymer design, development and production can benefit from machine-learning</i>
15:00–15:30	Keynote #3 – Manfred Zinn <i>Advanced Tools on Biopolymers</i>
15:30–15:45	T2.1 – <u>Rui Oliveira</u> , Deep hybrid modelling and control of microbiome evolution
15:45–16:00	T2.2 – <u>Kaisa Peltonen</u> , Towards modelling aided accelerated PHA material design
16:00–16:15	T2.3 – <u>Lionel Nguemna Tayou</u> , NOVEL continuous multi-reactors approach for Polyhydroxyalkanoates production with mixed microbial cultures
16:15–16:45	Coffee Break & Poster Session
16:45–17:00	T2.4 – <u>Pauline Gravermann</u> , Engineering of <i>Pseudomonas fluorescens</i> SBW25 towards efficient production of tailored alginates
17:00–17:15	T2.5 – <u>Nina Scheler</u> , Upcycling Depolymerised Plastic Fractions: Novel Bioprocesses for Biopolymer Production using <i>Pseudomonas putida</i>
17:15–17:30	T2.6 – <u>Eva Gonzalez-Flo</u> , High-Throughput screening of cyanobacterial PHB production using fluorescence-based detection
17:30–17:45	T2.7 – <u>Luca Bernabò</u> , Poly-β-hydroxybutyrate Production from Bread Waste via Sequential Dark Fermentation and Photofermentation
17:45–18:00	Flash presentations
18:00–19:30	Welcome Cocktail





THURSDAY | 2ND OF OCTOBER 2025

09:00–09:45	Section #3 Process and Functionalization Plenary Lecture #3 – Tim Börner <i>Assessing Biotechnological Pathways for Biopolymer Production, Application, and Recycling</i>
09:45–10:15	Keynote #4 – Auxiliadora Prieto <i>Engineering Bioinspired Functional Materials from Natural Biopolymers</i>
10:15–10:30	T3.1 – <u>Liang-Shin Wang</u> , Quality Control of Poly(3-hydroxybutyrate-co-3-hydroxyvalerate) Properties by Engineering Copolymer Blends
10:30–10:45	T3.2 – <u>Natalia Hernández Herreros</u> , Harnessing the Predatory Power of <i>Bdellovibrio bacteriovorus</i> HD100 for High-Efficiency PHA Recovery: Insights from Microbial Community Dynamics
10:45–11:00	T3.3 – <u>Isabel Thiele</u> , Approaches for Efficient and Eco-Friendly PHA Recovery
11:00–11:30	Coffee Break & Poster Session
11:30–12:00	Keynote #5 – Dieter Jendrossek <i>Enzymatic Biodegradation of Rubber and Fossil Hydrocarbon Polymers</i>
12:00–12:15	T3.4 – <u>Maria Batista</u> , Films based on supercritical carbon dioxide treated polyhydroxyalkanoates-rich microbial biomass
12:15–12:30	T3.5 – <u>Eva de Carvalho</u> , Design of crosslinked networks with tunable hydrophilicity based on PHA
12:30–12:45	T3.6 – <u>Ana Carolina Lemos de Morais</u> , Evaluation of Mechanical Properties and Biodegradation Behaviour of Polyhydroxyalkanoate (PHA) Based Blends
12:45–13:00	T3.7 – <u>Marina Rodríguez Carreiro</u> , Adaptation of <i>Pseudomonas putida</i> KT2440 to 6-acetylthiohexanoic acid (6-ATH) and its implications in PHA metabolism
13:00–13:15	Flash presentations
13:15–14:15	Lunch
14:15–15:00	Section #4 Biomedical and Technical applications Plenary Lecture #4– Miguel Gama <i>Bacterial Cellulose: State of the Art</i>
15:00–15:30	Keynote #6 – Ipsita Roy <i>Natural Sustainable Polymers of Bacterial Origin and Their Biomedical Applications</i>
15:30–15:45	T4.1 – <u>Arooj Fatima</u> , Transforming bacterial cellulose into microparticles for biomedical applications
15:45–16:00	T4.2 – <u>Petr Sedlacek</u> , Biofertilizers Reinvented: When Plant Growth-Promoting Bacteria Build Their Own Fertilizer Capsule
16:00–16:15	T4.3 – <u>Diana Araújo</u> , Dissolving microneedle arrays technology for efficient and painless drug delivery
16:15–16:45	Coffee Break & Poster Session
16:45–17:15	Keynote #7 – Jasmina Nikodinovic-Runic <i>'Shaping Up' Bacterial Biopolymers for Biomedical and Food Applications</i>
17:15–17:30	T4.4 – <u>Maria Eduarda Ribeiro</u> , Polyhydroxyalkanoate: tailoring electrospun membrane for skin repair
17:30–17:45	T4.5 – <u>Yuemei Lin</u> , Enrichment and application of bacterial sialic acids containing polymers from the extracellular polymeric substances of “ <i>Candidatus accumulibacter</i> ”
17:45–18:00	T4.6 – <u>Virginia Rivero Buceta</u> , Tailoring double-shelled hollow microparticles from polyester-modified bacterial cellulose for efficient microbial encapsulation and release
18:00–18:15	T4.7 – <u>Didem Ayçan</u> , Chitosan/Carboxymethyl Cellulose Aerogels for Controlled Release Applications in Inflammatory Bowel Disease Treatment
18:15–18:30	Flash presentations
19:30	Conference Dinner at Páteo Velho (bus departure at 19:00)





FRIDAY | 3RD OF OCTOBER 2025

09:00–09:45

Section #5 Circularity, Market & Impact

Plenary Lecture #5 – Kevin O’Connor
Bio-based biodegradable plastics in a circular economy

09:45–10:15

Keynote #8 – Marianna Villano
From Biowaste to Bioplastics: A Roadmap of Challenges, Constraints, and Opportunities

10:15–10:30

T5.1 – Leticia Labriola, Bioplastics from the Field: Valorizing Agricultural By-Products through Sugars365

10:30–10:45

T5.2 – Silvio Matassa, Single-Cell Protein Bioplastic Films from Recovered Nitrogen and Carbon: A Circular Approach with High Anaerobic Biodegradability

10:45–11:00

T5.3 – Dominik Wielend, From Breakdown to Biocycle: Modeling PHB depolymerization for circular use by introducing novel probability function

11:00–11:30

Coffee Break & Poster Session

11:30–12:00

Keynote #9 – Alan Werker
Mixed microbial culture poly (3-hydroxybutyrate-co-3hydroxyvalerate) from municipal wastewater – defining quality, dispelling myths, and dancing with the elephant in the room

12:00–12:15

T5.4 – Ana Rita Gomes, Biobased vs. conventional microplastics: the impact on gilthead seabream (*Sparus aurata*) brain health and behaviour

12:15–12:30

T5.5 – Enric Garcia Muchart, Characterization of exopolysaccharide-based biostimulants obtained from agri-food by-products to enhance plant tolerance to salinity

12:30–12:45

T5.6 – Gert Hofstede, Fit-for-Purpose PHBV Production from Lignocellulosic Biomass: Coupling an Artificial Rumen and Sequencing Batch Reactor

12:45–13:00

T5.7 – Sebastian Riedel, Enabling a Circular Bioeconomy: Process Innovations for PHA Bioplastics

13:00–14:15

Lunch

Section #6 Biopolymers degradation and recycling

14:15–14:45

Keynote #10 – Kumar Sudesh
Degradation of Bioplastics by Mealworms

14:45–15:00

T6.1 – José Daniel Santos-García, Extracellular Mcl-PHA Depolymerases in *Pseudomonas*: Enzymatic Drivers of Bioplastic Degradation

15:00–15:15

T6.2 – Ludovic Dulac, Monitoring microplastic generation from PHA degradation in soils using fluorescence-based detection methods

15:15–15:30

T6.3 – Daisuke Kasai, Identification and functional characterization of enzymes involved in poly(cis-1,4-isoprene) degradation in *Rhodococcus*

15:30–15:45

T6.4 – Laura Eugenio Martinez, Cracking bioplastics: reprogramming PHA depolymerases for a greener future

15:45–16:00

T6.5 – Rodrigo Andler, Improving degradation yields of poly(cis-1,4-isoprene) rubber: A study of the enzymatic kinetics of Latex clearing protein

16:15–16:45

Best oral and Best Poster presentation Prizes
Closing Session

