



Préliminary Program

All sessions and presentation of this program are subject to changes.

Molecular basis of the biopolymer synthesis and metabolic engineering
Biopolymer production
Biopolymer production : metabolism, measure and modelling
Biopolymer production: case studies
Materials: formulation and applications
Materials: structure and fonctionnalisation
Materials: Biomedical applications

Wednesday 05/07

8:20 - 9:40	Registration & welcome coffee
9:40 - 10:10	Introduction
10:10-10:50	Plenary lecture: PHA production for resource recovery from industrial wastewater. R. Kleerbezem, TU Delft (The Netherlands)
10:50 - 11:10	Coffee break
11:10 - 11:50	Plenary lecture: From biomass to innovative renewable polymer material Luc Averous, BioTeam/ICPEES-ECPM, UMR CNRS 7515, Université de Strasbourg (France)
11:50 - 12:20	Key-Note: Alginate-like extracellular polymers from granular sludge: property and application. Y. Lin, TU Delft (The Netherlands)
12:20 - 12:50	Key-Note: Autotrophy for the production of biopolymers: state of the art and current technological developments. Manfred Zinn, University of Applied Sciences and Arts (Western Switzerland)
12:50 - 14:20	Lunch and poster session
14:20 - 14:50	Key-Note : An updated view of medium-chain length polyhydroxyalkanoate production. A. Prieto, Biological Research Center - CSIC (Spain)
14:50 - 15:10	30 Years of Research on PHB Metabolism in Ralstonia eutropha: Unexpected Insights in Regulation of PHB Synthesis and PHB Mobilization. D. Jendrossek, Institute of Microbiology, University Stuttgart (Germany)
15:10 - 15:30	Phasins at hydrophilic-hydrophobic interfaces: a promising tool for new biotechnological applications. A. Mato, Biological Research Center - CSIC (Spain)
15:30 - 15:50	Genetic Modifications of Cupriavidus necator for Industrial Production of PHBH, and Development of Novel PHA Polymers. S. Sato , KANEKA Corporation, (Japan)
15:50 - 16:10	Directing the metabolism of xylose towards polyhydroxyalkanoates in Burkholderia sacchari. M.T. Cesário, iBB-IST (Portugal)
16:10 - 16:40	Coffee break
16:40 - 17:10	Key-Note: Cyanophycin – Features and current research of a biotechnologically relevant polyamide. Wiefel L, WWU Münster (Germany)
17:10 - 17:30	PHAsCl-producing bacteria from the marine environments: detection, production and valorisation. C. Jain Beuquel, Laboratoire de microbiologie des environnements extrêmophiles (France)
17:30 - 17:50	System analysis of the PHA cycle with a focus on PhaZ in the metabolic robustness of Pseudomonas putida. M-T. Manoli, Biological Research Center - CSIC (SPAIN)
17:50 - 18:10	Gel-forming polymers as an opportunity for resource recovery from wastewater (treatment). S. Felz, Delft University of Technology (Netherlands)
18:10 - 18:30	Biobased networks based on semi-interpenetrating poly(3-hydroxyalkanoate)s and sunflower oil.

8:50 - 9:20	<p>Key-Note: Sustainable processes for the production of biopolymers by microorganisms: new paradigm for resource recovery. M. Reis, UCIBIO-REQUIMTE Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa (Portugal)</p>	
9:20 - 9:50	<p>Key-Note: An Urban Biorefinery to convert organic waste into bio-based plastics: the H2020 RES URBIS project. M. Majone, Sapienza - University of Rome (Italy)</p>	
9:50 - 10:10	<p>Commercial Quality Biopolymer Production With Dutch Full Scale Municipal Activated Sludge. A. Werker, University of Queensland, Promiko AB (Sweden)</p>	
10:10-10:30	<p>Integrating production of PHA into bio-refinery concept: considering the impact of non-optimal cultivation conditions. S. Obruca, Faculty of Chemistry, Brno University of Technology (Czech Republic)</p>	
10:30-10:50	<p>Stable selection of PHA producer consortia using a continuous reactor with double C and P growth limitation. L. Cavallé, LISBP (France)</p>	
10:50 - 11:10	<p>Extraction of Polyhydroxyalkanoates (PHA) from Mixed Microbial Culture (MMC): mild solutions and health & safety aspects. F. Valentino, Sapienza - University of Rome (Italy)</p>	
11:10 - 11:40	<p>Coffee break</p>	
11:40 - 12:10	<p>Key-Note: Enzymatic and chemical modification of alginates for biomedical applications. B. Løkensgard Strand, NOBIPOL, Department of Biotechnology and Food Science, NTNU Norwegian University of Science and Technology (Norway)</p>	
12:10 - 12:30	<p>Forensic engineering of advanced biopolymer materials. M. Kowalczyk, Centre of Polymer and Carbon Materials, Polish Academy of Sciences, University of Wolverhampton, Faculty of Science & Engineering (United Kingdom)</p>	
12:30 - 13:00	<p>Key-Note: Natural polymers for biomedical applications. I. Roy, University of Westminster (United Kingdom)</p>	
13:00 - 14:30	<p>Lunch and poster session</p>	
14:30 - 15:00	<p>Key-Note: End of life of plastics: enzyme-catalyzed biodegradation or recycling. A. Marty, LISBP, Carbios (France)</p>	<p>Key-Note: Formal- and High- Structured Kinetic process Modelling and footprint area analysis of binary imaged cells to understand and optimize multistage-continuous PHA biosynthesis. M. Koller, University of Graz, Office of Research Management and Service, c/o Institute of Chemistry (Austria)</p>
15:00 - 15:20	<p>Release kinetics and fungicidal activity of tebuconazole embedded in P3HB in soil microecosystems. N. Zhila, Institute of Biophysics SB RAS, Federal Research Center "Krasnoyarsk Science Center SB RAS", Siberian Federal University (Russia)</p>	<p>Strict uncoupling of growth nutrients as a robust strategy for biopolymer production using mixed microbial cultures. G. Stouten, Delft University of Technology (Netherlands)</p>
15:20 - 15:40	<p>Bilayer films of fucopol and chitosan for walnuts packaging. I. Coelho, LAQV/REQUIMTE, Chemistry Department, FCT/Universidade Nova de Lisboa (Portugal)</p>	<p>Model based study of substrate competition on the PHA production process by mixed microbial cultures. Wang X, UCIBIO-REQUIMTE Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa (Portugal)</p>
15:40 - 16:00	<p>Effect of biodegradation on physical properties of PLA-based blends. I. Chodak, Polymer Institute SAS (Czech Republic)</p>	<p>Modeling the effect of phosphorus limitation on PHB production. E. Paul, LISBP (France)</p>
16:00 - 16:20	<p>Biosorption of heavy metals from aqueous solutions using an exopolysaccharide synthesized by Enterobacter A47 from glycerol. P. Reis, UCIBIO-REQUIMTE, Faculdade de Ciências e Tecnologia/Universidade Nova de Lisboa, Chemistry Department (Portugal)</p>	<p>Simultaneous quantification of bacteria, PHB and EPS in mixed culture using mid infrared spectroscopy combined with PLS regression. JN Louvet, LISBP (France)</p>
16:20 - 16:50	<p>Coffee break</p>	<p>Coffee break</p>
16:50 - 17:20	<p>Key-Note: Rubber: historical overview and recent developments. D. Jendrossek, Institute of Microbiology, University Stuttgart (Germany)</p>	<p>Key-Note: Expanding the natural diversity of microbial exopolysaccharides by screening and genetic engineering approaches. J. Schmid, Technical University of Munich, (Germany)</p>
17:20 - 17:40	<p>Constructing slow-release formulations of a nitrogen fertilizer and a pesticide based on degradable poly(3-hydroxybutyrate) and its composites. A. Boyandin, Siberian Federal University (Russia)</p>	<p>King Midas Approach - turning waste into valuable bioactive oligomers. I. Radecka, University of Wolverhampton, Faculty of Science & Engineering (United Kingdom)</p>
17:40 - 18:00	<p>Fabrication of hydrophobic, high barriers, plasticized cellulose acetate oleate materials for food packaging. G. Tedeschi, Smart Materials, Istituto Italiano di Tecnologia (Italia)</p>	<p>Increasing PHA productivity at pilot scale using fruit juice industry residues as feedstock. M. Matos, UCIBIO-REQUIMTE, Faculty of Sciences and Technology, Universidade NOVA de Lisboa (Portugal)</p>
18:00 - 18:20	<p>Processing, characterization and numerical simulation of biopolymers reinforced with Miscanthus giganteus fibers. E. Rodi, ICMPE (France)</p>	<p>Towards greener PHA production. Life Cycle Assessment (LCA) as a tool to develop a more environmental-friendly process. P. Lemechko, Institut de Recherche Dupuy de Lôme, (France)</p>
18:20 - 18:40	<p>Converting agricultural waste into ecological and economic assets: ECOBIOCAP experience and NoAW ambition. H. Angellier-Coussy, RU IATE, INRA, Montpellier University (France)</p>	
20:00 - 24:00	<p>Gala Dinner</p>	

Friday 07/07

8:50 - 9:10

Design of novel PHAs by chemical modifications.
V. Langlois, ICMPE (France)

9:10 - 9:30

Polyhydroxyalkanoates as precursors for synthesis of next high added value polymeric biomaterials.
G. Adamus, Centre of Polymer and Carbon Materials, Polish Academy of Sciences (Poland)

9:30 - 09:50

Poly(3-hydroxyalkanoate) as Bio-based Antibacterial Network by photoinitiated process.
T. Modjinou, ICMPE (France)

09:50 - 10:10

Poly-4-hydroxybutyrate and its use as a resorbable scaffold for tissue support.
S. Iverson, Tephac Inc. (USA)

10:10 - 10:30

Investigation of toxicological and biomedical properties of PHA.
E. Shishatskaya, Institute of Biophysics SB RAS, Federal Research Center "Krasnoyarsk Science Center SB RAS", Siberian Federal University (Russia)

10:30 - 10:50

Alginate/Chitosan PECs elaboration and surface modification for biomedical application.
A. Tourette, Centre interuniversitaire de recherche et d'ingénierie des matériaux (France)

10:50 - 11:20

Coffee break

11:20 - 11:40

Strategies for stabilising alginate gel beads with intermediate G-content.
A. Coron, Norwegian University of Science and Technology (Norway)

11:40 - 12:00

Interest of alginate foam scaffolds for soft tissue engineering.
S. Fullana, UMR CNRS 5085 (France)

12:00 - 12:20

Characterization of medium chain length polyhydroxyalkanoates from Pseudomonas chlororaphis for medical applications.
J.R. Pereira, UCIBIO-REQUIMTE, Chemistry Department, FCT/Universidade Nova de Lisboa (Portugal)

12:20 - 12:50

Conclusion

12:50 - 14:20

Lunch

14:20 - 17:30

Technical Tour: lets visit airbus



ESBP
2017

9th European Symposium on Biopolymers

Toulouse, July 5-7, 2017



List of posters

Amyloids-DNA complexes contribute to adherence and cohesiveness of Bacillus biofilms.

Neuhauser Elisabeth, France

Assessment of the adhesive properties of the bacterial polysaccharide FucoPol.

Araujo Diana, Portugal

Barrier properties of biocolloidal substances studied by diffusion techniques.

Smilek Jiri, Czech Republic

Biobased Hydrogel / Carbon nanotubes Nanocomposites for the Electrostimulated Transdermal Delivery of Insulin.

Guillet Jean-François, France

Bio-based Poly(3-hydroxyalkanoate)/ multi-walled carbon nanotube electrospun scaffolds.

Modjinou Tina, France

Biocomposites from PHBV and olive pomace-based fillers : Impact of filler composition.

Lammi Sarah, France

Chemical modifications of PHAs to tailor functional PHA-based materials for biomedical or environmental applications.

Versace Davy-Louis, France

Cloning Staphylococcus aureus nuclease gene into polyhydroxyalkanoates producers reduces cell lysate viscosity during downstream processes.

Basaglia Marina, Italy

Cupriavidus necator H16 as chassis organism for polyhydroxyalkanoate (PHA) copolyesters production from CO₂.

Katalin Kovacs, United Kingdom

Design and Synthesis of Functional Nanoporous Catalytic Supports from Polylactide-Based Diblock Copolymers.

Grande Daniel, France

Development of antibacterial nerve conduits.

Paxinou Alexandra, United Kingdom

Development of genetic tools for an optimized production of polyhydroxyalkanoates (PHAs).

Thomas Tatiana, France

Development of photosynthetic mixed culture systems for polyhydroxyalkanoates production for the valorisation of wastewater and agricultural wastes.

J.P. Aranha, Portugal

Elucidating the composition and mechanical properties of extracellular polymeric substances of anammox granular sludge.

Boleij Marissa, Netherlands

Engineering microbial consortia for the production of mcl-PHA.

Perez Rivero Cristina, France

Engineering PHAs producers to process slaughterhouse waste into biopolymers.

Rodriguez Gamero Jesus, Italy

Green Wood Plastic Composites: contribution of numerical modeling on the mechanical properties of the material.

Rodi Erica Gea, France

Identification of genes involved in cellulose biosynthesis in Gluconacetobacter medellinensis strain ID13488.

Hernández-Arriaga Ana María, Spain

Influence of Nitrogen-, Phosphorous-, and Oxygenlimitation on Polyhydroxyalkanoate Production in Bacillus megaterium.

Schmid Maximilian, Austria

PELARGODONT Novel biopolymer materials for delivery system on inflamed periodontal surface area with Pelargonium sidoides biologically active substance

Savickiene Nijole, Lithuanian university of health sciences, Lithuania

PHA production as valorisation of wastewater from mussel boilers

Fra-Vázquez Andrea, Spain

Photoinduced Modification of Natural Poly(3-hydroxybutyrate-co-3-hydroxyvalerate) Surface for Antibacterial Applications.

Sautrot Pauline, France

Physico-chemical and morphological studies of native and artificial PHB granules with respect to their protective role in bacterial cells.

Sedlacek Petr, Czech Republic

Pilot plant Polyhydroxyalkanoates (PHA) production from the organic fraction of municipal solid waste (OFMSW).

Valentino Francesco, Italy

Polyhydroxyalkanoates production by Bacillus cereus RCL 02 endophytic to leaves of oleaginous plant Ricinus communis L.

Das Rituparna, India

Polyhydroxyalkanoates production from pinewood pyrolysis oil: pre-fermentation and culture selection.

Freches André, Portugal

Production of mcl-PHA from acidified pressed sugar beet pulp.

Kacanski Milos, Austria

Production of PHA from diverse carbon sources by Burkholderia xenovorans LB400.

Alvarez-Santullano Natalia Sofia, Chile

Production of Polyhydroxybutyrate (PHB) polymer from monosaccharides simulating local biomass resources in high cell density fermentations.

Britton James, Ireland

Relationship between structure and viscoelastic properties of reactive polyelectrolyte hydrogels.

Kalina Michal, Czech Republic

Revalorization of waste activated sludge (WAS) to produce Volatile Fatty Acids (VFA) through acidogenic fermentation.

Veiga Maria C., Spain

Seaweed residues for polyhydroxyalkanoate production by marine bacteria.

M. Teresa Cesário, Portugal

Selection of PHB producers from Mixed Microbial Consortia in chemostat under nitrogen limitation.

Morgado Ferreira Ana, France

Substrate screening for production of medium chain length polyhydroxyalkanoates in Pseudomonas chlororaphis.

Pereira João Ricardo, Portugal

The conversion of polyethyleneterephthalate (PET) monomers into polyhydroxyalkanoate.

Beagan Niall, Ireland

The PHA toolbox.

Hanik Nils, Switzerland

Use of WWTP waste sludge for polyhydroxyalkanoates biosynthesis at pilot plant towards an integrated biorefinery.

Maria Reis, Portugal

Vegetable oil hybrid films cross-linked at aqueous surface.

Theodoratou Antigoni, France

Versatile routes to biofunctionalization of biodegradable PHA-based electrospun scaffolds.

Grande Daniel, France

Weathering of plastics in open ocean: from macro to micro scale.

Ter Halle Alexandra, France
