

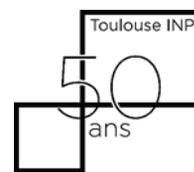
# 15th International Conference on Renewable Resources and Biorefineries

3 - 5 June 2019 • Toulouse, France

## Final Program



Université Fédérale





09.00 – 10.30 Registration

10.30 – 10.45 **Official Opening of RRB-15**  
Christian Stevens, Ghent University, BE

**Welcome to Toulouse**

Olivier Simonin, President of the Institut National Polytechnique de Toulouse  
Laurent Prat, Directeur of the École Nationale Supérieure des Arts Chimiques et Technologiques

**Opening Plenary Session**

Chair: Carlos Vaca Garcia, University of Toulouse, FR

10.45 – 11.15 **Keynote Lecture 1**  
**Bioeconomy and Industrial Biotechnology – an EU perspective**  
Agnes Borg, Director, Industrial Biotechnology at EuropaBio - the European Association for Bioindustries

11.15 – 12.00 **Keynote Lecture 2**  
**How green is my project? An app-based approach to saving the planet**  
Steven Abbott, TCNF Ltd, UK and Lorie Hamelin, University of Toulouse, FR

12.00 – 13.00 Lunch

Amphi 300

**Monday, 3 June 2019**

13.00 - 14.30 Parallel sessions

	Amphi 300 - Session 1A	Amphi 100 - Session 1B	Salle de Thèses - Session 1C
	<b>Biobased materials - I</b> Chair: Philippe Evon, University of Toulouse, FR	<b>Biomass fractionation</b> Chair: Pierre-Yves Pontalier, University of Toulouse, FR	<b>Biocatalysis for bioresource transformation - I</b> Chair: Magali Rемаud Simeon, University of Toulouse, FR
13.00 – 13.30	<b>Thin films from wood-based polymers</b> Stefan Spirk, TU Graz, AT	13.00 - 13.30 <b>Integrated approach for the development of industrial hemp: From the field to the composite material</b> Bernard Kurek, INRA, Reims University, FR	13.00 – 13.30 <b>Evolution and diversity of plant lignins</b> Hugues Renault, University of Strasbourg, FR
13.30 – 13.55	<b>Functional polymeric materials with ball-milled lignin and kraft lignin levels above 90 wt%</b> Simo Sarkanen, University of Minnesota, USA	13.30 – 13.55 <b>Formic acid assisted selective dissolution and degradation of lignin from pubescens in H2O-ethanol</b> Qianying Fang, Sichuan University, CN	13.30 – 13.55 <b>Biocatalytic alternatives for valorization of alpha-pinene</b> Madalina Tudorache, University of Bucharest, RO
13.55 – 14.20	<b>Rigid polyurethane/ polyisocyanurate foams obtained from high functional tall oil polyols</b> Ugis Cabulis, Latvian State Institute of Wood Chemistry, LV	13.55 – 14.20 <b>Fabrication and in-situ separation of the oligomeric products from total depolymerization of pubescens using a catalyst-free biphasic system: An entry point into biorefinery</b> Zhicheng Jiang, Sichuan University, CN	13.55 – 14.20 <b>Biocatalysis to produce surfactants and biologically active molecules from xylans and lignocellulosic biomass</b> Caroline Rémond, Université de Reims Champagne-Ardenne, FR
14.20 – 14.30	<b>Acidification of spent coffee grounds as a step for bioplastics production</b> Joana Pereira, Universidade de Aveiro, PT	14.20 – 14.30 <b>Wood extracts fractionation</b> Nicolas Beaufils, INRA, FR	14.20 – 14.30 <b>Carboxylic acid reductases as potential biocatalysts for the selective reduction of renewable carboxylic acids</b> Douglas Weber, Forschungszentrum Jülich, DE

14.30 – 15.15 Coffee Break

15.15 – 15.25 **Microbial research – High-throughput micro fermentations**  
Sebastian Blum, Director, Sales Europe, m2p-labs GmbH, DE

15.25 – 15.45 **Keynote Lecture**  
**Pilots4U: pilot plants for development and scale-up of biobased processes**  
Wim Soetaert, CEO Bio Base Europe Pilot Plant, BE

Amphi 300

15.45 – 17.15 Parallel sessions

Amphi 300 - Session 2A	Amphi 100 - Session 2B	Salle de Thèses - Session 2C
<b>Biobased materials - II</b> Chair: Stefan Spirk, TU Graz, AT	<b>Bioactive compounds from biomass</b> Chair: Pascale De Caro, University of Toulouse, FR	<b>Bioenergy</b> Chair: Wim Soetaert, Ghent University, BE
15.45 – 16.15 <b>Proteins for food, feed and biobased applications</b> Wim Mulder, Wageningen University and Research, NL	15.45 – 16.15 <b>Eco-driven production of bioactive compounds with ERI 360° standard scoring tool</b> Nathalie Calvel, Pierre Fabre Laboratories, FR	15.45 – 16.15 <b>Integration of cellulosic biomass to biofuel conversion in the steel industry</b> Wim Van der Stricht, ArcelorMittal, BE
16.15 – 16.40 <b>Evaluation of formaldehyde and total volatile organic compounds emissions of fiberboards resulting from a coriander biorefinery versus commercial wood-based building materials</b> Philippe Evon, University of Toulouse, FR	16.15 – 16.40 <b>Effect of soluble phenolic compounds from hydro-thermally pretreated wheat straw on cellulose hydrolysis</b> Ville Pihlajaniemi, VTT Technical Research Centre of Finland Ltd, FI	16.15 – 16.40 <b>Bioethanol production by <i>Enterobacter A47</i>: A proof-of-concept</b> Mauro Pereira, Universidade Nova de Lisboa, PT
16.40 – 17.05 <b>Post-treatment of oxidized lignin for versatile dispersants using membrane filtration</b> Viviana Polizzi, Flemish Institute for Technological Research, BE	16.40 – 17.05 <b>Production of phenazines by the bacterium <i>Pseudomonas chlororaphis</i> using glycerol</b> Bruno R. Serafim, Universidade Nova de Lisboa, PT	16.40 – 17.05 <b>Optimizing biomethane production across the whole value chain</b> Aude Bertrandias, Air Liquide, FR
17.05 - 17.15 <b>Designing multi-copper oxidases for bio-transformation and upgrading of lignin</b> Verena Braunschmid, University of Natural Resources and Life Sciences, AT	17.05 - 17.15 <b><i>Mimosa tenuiflora</i> extract inhibits aflatoxin B1 synthesis</b> Christopher Hernandez Hernandez, Université de Toulouse, FR	17.05 - 17.15 <b>Screening of pretreatment and hydrolysis strategies for biofuel production</b> Caroline Marks, RWTH Aachen University, DE

18.30 **Guided city walk following by a reception at the Botanical Gardens (see page 104)****Welcome Address**

Philippe Raimbault, President of the Université Fédérale de Toulouse-Midi-Pyrénées

**Tuesday, 4 June 2019**

09.00 - 10.30 Parallel sessions

Amphi 300 - Session 3A	Amphi 100 - Session 3B	Salle de Thèses - Session 3C
<b>Pretreatment and transformation of lignocellulosics - I</b> Chair: Nicolas Beaufils, INRA, FR	<b>Biorefineries - I</b> Chair: Carlos Vaca Garcia, University of Toulouse, FR	<b>Chemical platform molecules – I</b> Chair: Chris Stevens, Ghent University, BE
09.00 – 09.30 <b>The Feedstock-Conversion Interface Consortium: Providing innovative solutions to address operational challenges faced by biorefineries</b> Michael Resch, National Renewable Energy Laboratory, USA	09.00 – 09.30 <b>Recent advances in biorefineries</b> Jean-Christophe Duval, ARD, FR	09.00 – 09.30 <b>Biorefining with low-cost ionic liquids: chemicals, fuels and economics</b> Jason Hallett, Imperial College London, UK
09.30 – 09.55 <b>Simultaneous process and utility optimization in biorefinery processes</b> Aikaterini Mountraki, National Technical University of Athens, Athens, GR	09.30 – 09.55 <b>Non-traditional biomass utilization: A biorefinery perspective for the United Arab Emirates</b> Hector Hernandez, Khalifa University of Science and Technology, UAE	09.30 – 09.55 <b>Preparation of D-excess-lactic acid by simultaneous dissolution and transformation of cellulose and hemicellulose in biomass by yttrium<sup>III</sup> species</b> Changwei Hu, Sichuan University, CN
09.55 – 10.20 <b>Lignocellulosic extracts fractionation by the combination of membrane filtration and chromatography</b> Pierre-Yves Pontalier, University of Toulouse, FR	09.55 – 10.20 <b>Research on olive derived biomass as a renewable source of energy, chemicals and materials</b> Eulogio Castro, Universidad de Jaén, ES	09.55 – 10.20 <b>Biobased emulsions including platform molecule derivatives for biocontrol applications</b> Douaa Salim, University of Toulouse, FR
10.20 – 10.30 <b>Fungal pretreatment on solid fraction of digestate to enhance its reuse as a feedstock for anaerobic digestion plants</b> Andrea Zanellati, University of Turin, IT	10.20 – 10.30 <b>A biorefinery concept using forced chicory roots for the production of biogas, hydrochar and platform chemicals</b> Katrin Stöckle, University of Hohenheim, DE	10.20 – 10.30 <b>Ustilago maydis as a production platform for tailor-made glycolipids</b> Peter Stoffels, Heinrich Heine University Düsseldorf, DE

10.30 – 11.15 Coffee Break

11.15 - 12.45 Parallel sessions

Amphi 300 - Session 4A	Amphi 100 - Session 4B	Salle de Thèses - Session 4C
<b>Biocatalysis for bioresource transformation – II</b> Chair: Tom Desmet, Ghent University, BE	<b>Pretreatment and transformation of lignocellulosics - II</b> Chair: Philippe Tavernier, Development Agency of West Flanders (POM West Flanders), BE	<b>CO<sub>2</sub> utilisation</b> Chair: Stéphane Guillouet, University of Toulouse, FR
11.15 – 11.45 <b>Development and characterization of multi-enzymatic system for lignocellulose degradation</b> Claire Dumon, University of Toulouse, FR	11.15 – 11.45 <b>Biotechnological production of polyols through conversions of crude glycerol by newly isolated strains of the yeast <i>Yarrowia lipolytica</i></b> Eleni-Stavroula Vastaroucha, Agricultural University of Athens, GR	11.15 – 11.45 <b>Biological methanation: A new opportunity to recycle CO<sub>2</sub> into green energy</b> Viviana Contreras Moreno, ENOSIS, FR
11.45 – 12.10 <b>Towards the in house production of enzymes using processing waste</b> Renate Weiss, University of Natural Resources and Life Sciences (BOKU), AT	11.45 – 12.10 <b>Selective recovery of acetic acid from biomass by subcritical water pretreatment</b> Guiliano Dragone, Technical University of Denmark, DK	11.45 – 12.10 <b>Carotenoid extraction from mango (<i>Mangifera indica</i>) waste via supercritical CO<sub>2</sub>: Process optimization, kinetics and bioactive properties</b> José Villacís-Chiriboga, Flemish Institute for Technological Research (VITO), BE
12.10 – 12.35 <b>Mechanism of enzymatic degradation of plant agricultural by-products under variable solid loadings conditions</b> Estelle Bonnin, INRA, FR	12.10 – 12.35 <b>Production of medium-chain length polyhydroxyalkanoates from grape pomace sugar-rich hydrolysates obtained by subcritical water hydrolysis</b> Juliana B Silva, Universidade Nova de Lisboa, PT	12.10 – 12.35 <b>Technoeconomic evaluation on the holistic conversion of biomass to levulinic acid</b> Andreas-Faidon Pateromichelakis, National Technical University of Athens, GR
12.35 – 12.45 <b>Enzymatic hydrolysis of Poly(ethylene 2,5-furanoate)(PEF)</b> Simone Weinberger, University of Natural Resources and Life Sciences Vienna, AT	12.35 – 12.45 <b>Ligninolytic potential of <i>Thermobacillus xylanilyticus</i> for the production of aromatic molecules</b> Quentin Czerwiec, FARE Laboratory, INRA, FR	12.35 – 12.45 <b>Coupling power-to-gas and biomass-to-gas systems: Application to the Occitanie region, France</b> Eduardo Carrera, University of Toulouse, FR

12.45 – 13.30 Lunch

13.30 – 14.30 **Poster Tour 1**

14.30 - 16.00 Parallel sessions

Amphi 300 - Session 5A	Amphi 100 - Session 5B	Salle de Thèses - Session 5C
<b>Thermochemical transformations of biomass</b> Chair : Thierry Ribeiro, Institut Polytechnique UniLaSalle, FR	<b>Horizon 2020</b> Chair: Volker Heil, Fraunhofer UMSICHT, DE	<b>Sustainability and circular economy</b> Chair: Philippe Tavernier, Development Agency of West Flanders (POM West Flanders), BE
14.30 – 15.00 <b>Unravel mechanisms in the thermochemical conversion of biowaste and biomass</b> Ange Nzihou, Laboratoire Rapsodee & École des Mines d'Albi, FR	14.30 – 15.00 <b>Social dimensions of biofuel and alternative fuel production and use in Europe</b> Yara Evans, Imperial College London, UK	14.30 – 15.00 <b>Integrating a biorefinery into a Kraft pulping mill for the production of second generation bioethanol</b> Ana M.R.B. Xavier, Universidade de Aveiro, PT
15.00 – 15.25 <b>Upgrading hydrothermal liquefaction biocrude derived from lignocellulosic biomass to drop-in biofuels</b> Kamaldeep Sharma, Aalborg University, DK	15.00 – 15.25 <b>The BABET-REAL5 project – Sustainable biofuel production</b> Gérard Vilarem, Institut National Polytechnique de Toulouse, FR	15.00 – 15.25 <b>Circular Economy: Increasing the value of selected municipal and industrial waste streams into biofuels and biocoal</b> Roland Verhé, Renasci, BE
15.25 – 15.50 <b>Demonstration of a continuous TORWASH® pilot plant for sewage sludge: Thermal treatment, dewatering and effluent processing</b> Pavlina Nanou, ECN part of TNO, NL	15.25 – 15.50 <b>Advanced biomass catalytic conversion to middle distillates in molten salts</b> Homer Genuino, Engineering and Technology institute Groningen (ENTEG), NL	15.25 – 15.50 <b>Developing a sustainable route to a yeast-based palm oil alternative: The role of Life Cycle Assessment (LCA) and Techno-Economic Analysis (TEA)</b> Sophie Parsons, University of Bath, UK
15.50 - 16.00 <b>The effect of bark biochar on peat based growing mediums</b> Dilani Rathnayake, Ghent University, BE	15.50 – 16.00 <b>To-Syn-Fuel: Turning sewage sludge into fuels and hydrogen</b> Jan Grunwald, Fraunhofer UMSICHT, DE	15.50 - 16.00 <b>The industrial production of renewables-based propylene glycol: An environmental sustainability perspective</b> Pieter Nachtergaele, Ghent University, BE

16.00 – 16.30 Coffee Break

16.30 – 18.00 Parallel sessions

Amphi 300 - Session 6A	Amphi 100 - Session 6B	Salle de Thèses - Session 6C
	<b>Horizon 2020</b> Chair: Gérard Vilarem, Institut National Polytechnique de Toulouse, FR	<b>Chemical platform molecules - II</b> Chair: Michael Sauer, BOKU, AT
16.30 – 17.00 <b>Hemicellulose and protein integration in sustainable biorefineries</b> Solange Mussatto, DTU Biosustain, DK	16.30 – 17.00 <b>Small and highly efficient hydrothermal liquefaction (HTL) units for scalable mass implementation in biomass conversion</b> Ib Johannsen, Aarhus University, DK	16.30 – 17.00 <b>Selective hydrogenation of lignin-derived phenols to cyclohexanols over Pd/<math>\gamma</math>-Al<sub>2</sub>O<sub>3</sub> in aqueous phase</b> Xudong Liu, Sichuan University, CN
17.00 – 17.25 <b>An efficient process for the enzymatic conversion of pretreated <i>Pinus radiata</i> into wood sugars and their application in the production of polyhydroxyalkanoates</b> Alankar Vaidya, Scion, NZ	17.00 – 17.25 <b>Paludiculture in a Mediterranean peatland: Energy yields from anaerobic digestion of three perennial energy crops</b> Federico Dragoni, Institute of Life Sciences, IT	17.00 – 17.25 <b>Direct electrochemical extraction of bio-based succinic acid by a genetically engineered yeast strain <i>Yarrowia lipolytica</i> through valorisation of municipal solid waste</b> Eleni Stylianou, Agricultural University of Athens, GR
17.25 – 17.50 <b>The Mp2 project: Producing a palm oil substitute from waste feedstocks through a one-step microwave process with <i>Metschnikowia pulcherrima</i></b> Chris Chuck, University of Bath, UK	17.25 – 17.50 <b>On the systematic analysis and design of HTL reactors that combine industrial-scale experiments and model-based technology</b> Edvin Mamo, School of Chemical Engineering, GR	17.25 – 17.50 <b>Two-phase high-pressure CO<sub>2</sub>-H<sub>2</sub>O system as reactional and extracting medium for biomass conversion</b> Séverine Camy, University of Toulouse, FR
17.50 – 18.00 <b>Optimisation of a process for the production of bio-vanillin from corn fibre</b> Rita Valério, Universidade Nova de Lisboa, PT	17.50 – 18.00 <b>Catalytic upgrading of straw-based ablative fast pyrolysis vapours in a downstream fixed-bed reactor</b> Volker Heil, Fraunhofer UMSICHT, DE	17.50 – 18.00 <b>Development of an integrated and scalable process for continuous valorization of dilute volatile fatty acids from CO<sub>2</sub></b> Pieter Naert, Ghent University, BE

20.00 Conference Dinner and Networking Event at Les Caves de la Maréchale (see page 104)

**Wednesday, 5 June 2019**

09.00 - 10.30 Parallel sessions

Amphi 300 - Session 7A	Amphi 100 - Session 7B	Salle de Thèses - Session 7C
<b>Biorefineries – III</b> Chair: Carlos Vaca Garcia, University of Toulouse, FR	<b>Valorization of biomass waste streams - I</b> Chair: Adam Dobrowolski, WUELS, PL	<b>Micro &amp; macro algal technology - I</b> Chair: Carl Safi, Wageningen University, NL
09.00 – 09.30 <b>Biochar-supported solid catalysts for achieving sustainable biorefineries</b> Daniel C.W. Tsang, Hong Kong Polytechnic University, CN	09.00 – 09.30 <b>Prebiotics production from underutilized agricultural and marine resources</b> Eva Nordberg Karlsson, Lund University, SE	09.00 – 09.30 <b>Integral Valorization of <i>Chlorella protothecoides</i> Biomass in a Biorefinery Framework</b> Christine Raynaud, University of Toulouse, FR
09.30 – 09.55 <b>The Integrated Biorefineries: Optimisation bioconversion of tropical biomass feedstock for producing value added chemicals and biogas</b> Irnia Nurika, Universitas Brawijaya, ID	09.30 – 09.55 <b>Production of lactic acid from the organic fraction of municipal solid wastes using <i>B. coagulans</i></b> J. Pablo López-Gómez, Leibniz Institute for Agricultural Engineering and Bioeconomy, DE	09.30 – 09.55 <b>Green macroalgae biorefinery: Extracting valuable components from <i>Ulva lactuca</i></b> Karla Dussan, Biomass & Energy Efficiency Group, NL
09.55 – 10.20 <b>Graphite/graphene oxide-supported lewis acids for catalytic glucose isomerisation in a biorefinery</b> Iris K.M. Yu, University of York, UK	09.55 – 10.20 <b>CichOpt: Optimal use and valorization of biomass streams from <i>Cichorium</i></b> Jeroen van Arkel, Wageningen Plant Research, NL	09.55 – 10.20 <b>Understanding natural flocculation mechanisms in microalgae to enhance flotation harvesting efficiency</b> Cécile Formosa-Dague, Université de Toulouse, FR
10.20 – 10.30 <b>Winery wastes as feedstock for the production of succinic acid, bacterial cellulose and value added products</b> Katiana Philippi, Agricultural University of Athens, GR	10.20 – 10.30 <b>Unlocking the potential of low-quality feedstocks for cost-effective production of biofuels: A case study for animal bedding</b> Miguel Sanchis-Sebastiá, Lund University, SE	10.20 – 10.30 <b>Valorisation of olive mill wastewater via microalgae</b> Astrid Victoria Lindner, University of Lüneburg, DE

10.30 – 11.30 Coffee Break &amp; Poster Tour 2

Amphi 300 - Session 8A	Amphi 100 - Session 8B	Salle de Thèses - Session 8C
<b>Metabolic engineering of cell factories</b> Chair: Isabelle Meynial, University of Toulouse, FR	<b>Valorization of biomass waste streams - II</b> Chair: Christelle Guigui, University of Toulouse, FR	<b>Biosurfactants</b> Chair: Wim Soetaert, Ghent University, BE
11.30 – 12.00 <b>From fuels to fragrances - Lessons learned and new approaches for prokaryotic cell factories</b> Patrik Jones, Imperial College London, UK	11.30 – 12.00 <b>Opportunities and hurdles towards closed loop recycling of plastics present in mixed organic waste streams from anaerobic digestion plants</b> Steven De Meester, Ghent University, BE	11.30 – 12.00 <b>Bringing tailor-made biosurfactants from lab to market</b> Sophie Roelants, InBio.be - Ghent University & Bio Base Europe Pilot Plant, BE
12.00 – 12.25 <b>Membrane transport as crucial screw for metabolic engineering of microbial cell factories</b> Michael Sauer, University of Natural Resources and Life Sciences Vienna, AT	12.00 – 12.25 <b>Understanding lignin co-pyrolysis with silicon nanoparticles for applications in lithium-ion batteries</b> Jian Shi, University of Kentucky, USA	12.00 – 12.25 <b>Mannosylerythritol lipids: Biosurfactants with a high molecule structure variability</b> Susanne Zibek, Fraunhofer IGB, DE
12.25 – 12.50 <b>Comprehensive study on <i>Escherichia coli</i> genomic expression: does position really matter?</b> Anke Goormans, Ghent University, BE	12.25 – 12.50 <b>Inherent metals of phytoremediation plant influences its recyclability by hydrothermal liquefaction</b> Shicheng Zhang, Fudan University, CN	12.25 – 12.50 <b>Interactions of food proteins with biosurfactants and bioemulsifiers</b> Karina Salek, Heriot-Watt University, UK
12.50 – 13.00 <b>Adaptive laboratory evolution restored solvent tolerance in the plasmid-cured <i>Pseudomonas putida</i> S12</b> Hadiastri Kusumawardhani, Leiden University, NL	12.50 – 13.00 <b>Towards biocatalytic lignin valorization: Interactions between laccase and aqueous ionic liquids</b> Joseph Stevens, University of Kentucky, USA	12.50 – 13.00 <b>Synthesis of a new organocatalyst bio-sourced surfactant</b> Clément Giry, ENSIACET-INP, FR

**Closing Ceremony**

Philippe Tavernier, Development Agency of West Flanders (POM West Flanders), BE

Amphi 300

13.00 – 13.05	<b>Presentation of the 8<sup>th</sup> Golden Crop Award</b>
13.05 – 13.15	<b>Presentation of the Best PhD Short Communication Awards</b> Erick Vandamme, Ghent University, BE
13.15 – 13.30	<b>Closing Remarks and Presentation of RRB-16</b> Philippe Tavernier, Development Agency of West Flanders (POM), BE
13.30	Farewell Lunch
14.30 – 16.00	<b>Optional lab visits (see page 105)</b>

**Poster List – Poster Tour 1****Bioactive compounds from biomass**

- P1** **Atlas pistacio (*Pistacia atlantica* desf.): A valuable source of bioactives**  
A. Labdelli, K. Zémour, V. Simon, M. Cerny, A. Adda, Othmane Merah (DZ & FR)
- P2** **Impact of spray-drying on biological properties of chitosan matrices supplemented with antioxidant fungal extracts for wine applications**  
Vanessa Durrieu, E. Choque, I. Alric, J. Raynal, F. Mathieu (FR)
- P3** **Valorisation of *Tectona grandis* sawdust**  
Lucero Paola Chávez Salgado, V. Vandenbossche, G. Viareem (FR)

**Biobased materials**

- P4** **Plant protein functionalization for their application in microencapsulation**  
Vanessa Durrieu, I. Alric, A. Nesterenko, J. Peydecastaing F. Silvestre, M.A. Anaya Castro, F. Brouillet, S. Giroud-Fullana (FR)
- P5** **Towards lighter, bio-based materials for the aeronautics: A cradle-to-gate life cycle assessment of flax fibre reinforcement in composite materials**  
Alejandra Gomez-Campos, C. Valle, A. Rouilly, L. Hamelin, C. Sablayrolles (FR)
- P6** **Pickering emulsion stabilized by wood particles**  
Romain Valentin, F. Vasquez, Z. Moulounqui (FR)
- P7** **Bioreactor production of the microbial glycolipid mannosylerythritol lipid (MEL) from renewable resources**  
Alexander Beck, S. Zibek (DE)
- P8** **New process for the upcycling of leather wastes by uniaxial thermocompression**  
Margaux Jumeaux, P. Verniole, A. Rouilly, V. Van Den Bossche, V. Durrieu (FR)
- P9** **Development of new bio-based lignin polyurethane coatings**  
Paola D'Arrigo, J.C. de Haro, C. Allegretti, S. Turri, G. Griffini (IT)
- P10** **Innovative low-density blocks from amaranth pith for the thermal insulation of buildings**  
Philippe Evon, G. de Langalerie, L. Labonne, O. Merah, T. Talou, S. Ballas, T. Veronèse (FR)
- P11** **Study of kefir production from cheese whey**  
J. Anjos, J. D'Ascensão, A. Lei, L.S. Serafim, Ana M.R.B. Xavier (PT)
- Biocatalysis for bioresource transformation**
- P12** **Towards the in house production of enzymes using processing waste**  
Renate Weiss, G. Nyvanhongo, G. Guebitz, M. Orthner (AT)
- P13** **Carboxylic acid reductases as potential biocatalysts for the selective reduction of renewable carboxylic acids**  
Douglas Weber, D. Rother (DE)
- P14** **Opening the route to novel biopolymers through 3D structural analysis and engineering of the sucrose active enzyme *altersucrase***  
Manon Molina, C. Moulis, N. Monties, S. Pizzuti-Serin, D. Guieysse, S. Morel, G. Cioci, M. Remaud-Simeon (FR)
- P15** **Catalytic properties of amylolytic enzymes produced by a thermophilic actinomycete strain on solid-state fermentation**  
Marwa Kherouf, A. Habbeche, A. Ladjama (DZ)





**P16 Lyophilized extracts from vegetable flours as economical alternative to purified oxygenases for the biocatalyzed synthesis of oxylipins**  
C. Sanfilippo, Daniela Biondi, A. Paterna, A. Patti (IT)

**P17 Developing a glycosylation platform technology to an industrial level**  
Zorica Ubiparip, C. Luley, T. Desmet, B. Nidetzky (BE & AT)

## Bioenergy

**P18 Paludiculture in a Mediterranean peatland: Energy yields from anaerobic digestion of three perennial energy crops**  
Federico Dragoni, V. Giannini, G. Ragaglini, N. Silvestri, E. Bonari (IT)

## Bioenergy, advanced biofuels, renewable fuels and future mobility in Horizon 2020

**P19 Advanced biomass catalytic conversion to middle distillates in molten salts**  
Homer Genuino, J. Winkelman, T. Bridgwater, D. Nowakowski, R. Venderbosch, H. Nygård, E. Olsen, F. Ronsse, W. Prins, M. Pala, R.-U. Dietrich, S. Estelmann, M. Sedin, J. Rosdahl, M. Bonaiuto, F. Dessi, H. Heeres (NL, UK, NO, BE, DE, SE & IT)

## Biomass fractionation

**P20 Adsorption of inhibitors from simulated moving bed chromatography separated sulphite spent liquor on polymeric resins**  
Danuta Mozdyniewicz, D. Bammer, R. Bischof (AT)

**P21 Fractionation of different hardwood species using steam pretreatment and hydrotropic extraction**  
Johanna Olsson, M. Galbe, O. Wallberg (SE)

**P22 Multi-step fractionation as a tool for enhanced valorization of technical lignins: A model study**  
Julien Troquet, C. Allegretti, Y. Krauke, M. Luebbert, K. Rischka, A. Strini, S. Turri, G. Griffini, P. D'Arrigo (FR, IT & DE)

**P23 The effect of using fungal pretreatment prior to the organosolv delignification process on the lignin yield and its characteristics**  
Qusay Ibrahim, M. Leschinsky, A. Kruse (DE)

## Biorefineries

**P24 A biorefinery concept using forced chicory roots for the production of biogas, hydrochar and platform chemicals**  
Katrin Stöckle, B. Hülsemann, P.J. Arauzo, Z. Cao, A. Kruse (DE)

**P25 Catalytic pyrolysis of wood and lignocelluloses for 1,6 – anhydrosugars formation**  
Aivars Zhurins, G. Dobeles, A. Volperts, V. Jurkjane, K. Meile, J. Zoldners (LV)

**P26 Applying design of experiments (DOE) to study effects of feed on butanol production of *Clostridium saccharoperbutylacetonicum***  
Florian Gattermayr, V. Leitner, T. Distler (AT)

**P27 Identification of potential fermentation inhibitors in agro-food waste hydrolysates for biobutanol production**  
Ana Paniagua-García, M. Hijosa-Valsero, J. Garita-Cambronero, R. Díez-Antolínez (ES)

**P28 Biorefinery development from apple waste streams and succinic acid production by genetically engineered *Yarrowia lipolytica***  
Katiana Philippi, C. Pateraki, C.S.K. Lin, A. Koutinas (GR & CN)

**P29 Phenolic content and antioxidant activity of safflower seed oil (*Carthamus tinctorius* L.) cultivated in semi-arid area**  
Kamel Zemour, T. Talou, A. Adda, A. Dellal, O. Merah (DZ & FR)

**P30 Integration of next generation biosurfactant production into biorefinery processes**  
Nina Ihling, M. Terfrüchte, K. Schipper, M. Feldbrügge, I. Bator, T. Tiso, L. Blank, S. Kubicki, S. Thies, K.E. Jaeger, M. Schelden, J. Büchs, P. Bongartz, M. Wessling, A. Biselli, A. Jupke, A. Schonhoff, P. Zapp, A. Schreiber, J.F. Hake (DE)

**P31 Pastel (*Isatis tinctoria*) a typical “Occitanian” plant for bio refinery purposes**  
Gérard Vilarem, C. Mathieu (FR)

**P32 Novel green biorefinery concept for producing extracted soluble protein and single cell protein from grass silage**  
Ville Pihlajaniemi, P. Niemi, S. Ellilä, S. Poikkimäki, M. Rinne, M. Nappa, R. Lantto, M. Siika-aho (FI)

**P33 Integrating a biorefinery into a kraft pulping mill: Production of succinic acid using kraft pulp hydrolysates**  
A.P. Macedo, D.V. Evtuguin, L.S. Serafim, Ana M.R.B. Xavier (PT)

**P34 Iterative model based approach for the systematic flowsheeting of bioprocesses**  
Aikaterini Mountraki, K. Antonis (GR)

**P35 Evaluating yeast strains for malic acid utilisation in a biorefinery application**  
Annica Steyn, M. Viljoen-Bloom, W.H. van Zyl (ZA)

**P36 Effect of proteins on hydrochars produced from brewer's spent grains**  
Pablo J. Arauzo Gimeno, L. Du, M.F. Meza Zavala, M.P. Olzsewski, A. Kruse (DE)

**P37 URBIOFIN Project: Demonstration of an integrated innovative biorefinery for the transformation of municipal solid waste into new biobased products**  
Antonio D. Moreno, C. Coll, M. Latorre, M. Ballesteros, M.J. Negro, J.M. Oliva (ES)

**P38 Mixed biomass feedstock approach in a biorefinery based on olive crop and olive oil industry by-products**  
Antonio D. Moreno, I. Higuera, F. Saez, M. Ballesteros, P. Manzanares (ES)

**P39 Effect of C/N ratio on arabinol and lipid production by the yeasts *Debaryomyces hansenii* and *Rhodospiridium toruloides***  
Rosanina Filippou, S. Michou, E. Vastaroucha, K. Mordini, S. Papanikolaou (GR)





## Poster List – Poster Tour 2

### Chemical platform molecules

- P40** The promotion effect of NaCl on the conversion of xylose to furfural  
Zheng Li, Y. Luo, Z. Jiang, C. Hu (CN)
- P41** Extraction of active products, phytochemical composition of the *Boswellia Serratta* resin from the family Burseraceae  
Amel Kherouf, O. Aouacheri, S.Saaka (DZ)

### Downstream processing

- P42** Solid-liquid separation as first down-stream process to optimize flavonoids recovery from fresh grapefruit peels  
Nuria Zarate-Vilet, E. Gué, C. Wisniewski, M. Delalonde (FR)
- P43** Continuous downstream extraction process for recovery of acetic acid from dilute aqueous solutions with supercritical CO<sub>2</sub>  
Astrid Novella, S.Camy, J.-S. Condoret (FR)

### Metabolic engineering of cell factories

- P44** Comprehensive study on *Escherichia coli* genomic expression: Does position really matter?  
Anke Goormans, N. Snoeck, H. Decadt, G. Peters, P. Coussement, J.J. Beauprez, S.L. De Maeseneire, W.K. Soetaert (BE)
- P45** Adaptive laboratory evolution restored solvent tolerance in the plasmid-cured *Pseudomonas putida* S12  
Hadiastri Kusumawardhani, B. Furtwängler, M. Blommestijn, R. Hosseini, J.H. de Winde (NL)

### Micro & macro algal technology

- P46** Development of a benchmark simulator for microalgae production  
Ryma Laifa, J. Morchain, A. Ahmadi, L. Barna, P. Guiraud (FR)
- P47** Integral valorization of *Chlorella protothecoides* biomass in a biorefinery framework  
Guadalupe Vaca-Medina, C. Delgado Raynaud, S. Suarez-Alvarez, I. Urreta, S. Castañón, M. Munárriz, J. Iruretagoyena, F. Monlau, C. Ferrer (FR & ES)
- P48** Can biomass from *Chaetomorpha linum* be considered as a candidate feedstock for integrated biorefineries?  
Federico Dragoni, V. Giannini, G. Alcantara Barata, A. Bertoli, E. Bonari (IT)
- P49** Nutrient recovery from the liquid fraction of grass for microalgal growth  
Marcella Fernandes de Souza, E. Michels, E. Meers (BE)

### Nutrient recycling: Biofertiliser production

- P50** Fertilizer performance of digestate and its derivatives as mineral fertilizers: A laboratory and a field scale assessment  
Mihaela Satvar, Z. Jukic, M. Petek, T. Karazija, I. Sigurnjak, L. Coga, E. Meers (HR & BE)
- P51** Solid fractions of digestate for agriculture: Assessment of carbon and nitrogen mineralization potential in soil  
Caleb Elijah Egene, I. Sigurnjak, I. Regelink, O. Schoumans, E. Michels, E. Meers (BE & NL)

- P52** Assessment of recycling-derived fertilizers and tailor-made blends at lab and field-scale  
Amrita Saju, I. Sigurnjak, E. Michels, E. Meers (BE)
- P53** Techno-economic assessment of N recovery from digestate for production of mineral biobased fertilizer at full-scale  
Claudio Brienza, I. Sigurnjak, E. Michels, O.F. Schoumans, U. Bauermeister, T. Meier, E. Meers (BE, NL & DE)
- P54** Meta-analysis on the agronomic efficiency and environmental impact of biobased N-fertilizers derived from agro-waste  
Hongzhen Luo, I. Sigurnjak, E. Michels, E. Meers (BE)

### Pretreatment and transformation of lignocellulosics

- P55** Ligninolytic potential of *Thermobacillus xylanilyticus* for the production of aromatic molecules  
Quentin Czerwiec, B. Chabbert, V. Aguié-Béghin, C. Ivaldi, B. Kurek, H. Rakotoarivonina (FR)
- P56** Improvement of fermentation of process lyes from pulp industry by its detoxification by UV irradiation  
Kateryna Wöss, P. Olschowski, Y. Golitsyna, H. Weber, H.K. Weber (AT)
- P57** Comparison of dilute acid pretreatments for sugar production from olive biomass  
Encarnación Ruiz, J.M. Romero-García, M.J. Díaz-Villanueva, Eulogio Castro (ES)
- P58** Consequences of dry pretreatments on lignocellulose features, digestibility and functional activity of a hydrolytic microbial consortium: Macro-kinetic and metaproteomic assessment  
Guillermina Hernandez-Raquet, E. Flajollet, A. Lazuka, N. Jehmlich, B. Henrissat (FR & DE)
- P59** Bagasse extracts fractionation  
Pierre-Yves Pontalier, V. Oriez, J. Peydecastaing (FR)

### Sustainability & the circular economy

- P60** The environmental impact of tall oil based polyols through life cycle assessment analysis  
Anda Fridrihsone, A. Abolins, E. Vanags (LV)
- P61** Environmental assessments of the olive oil life cycle  
Gabriela del Carmen Espadas Aldana, C. Vialle, J.P. Belaud, C. Sablayrolles (FR)
- P62** Process simulation and environmental assessment for novel dimethyl carbonate production  
Laurent Astruc, I. Rodriguez-Donis, C. Vialle, Z. Mouloungui, C. Sablayrolles (FR)

### Thermochemical transformations of biomass

- P63** Residual biomass baseline in France – Focus on use through thermochemical conversion processes  
Patrick Brassard, L. Hamelin, S. Godbout (FR & CA)
- P64** Conversion of brewery industry by-product via hydrothermal treatment coupled with pyrolysis: Py-GC-MS studies  
Maciej Pawel Olszewski, P.J. Arauzo, A. Kruse (DE)





## Valorisation of biomass waste streams

- P65 Recovery of lignin-based aromatics and hydrocarbons from recycled paper waste stream**  
Giorgio Tofani, I. Cornet, P. Wille, M. Gistelincq, S. Tavernier (BE)
- P66 The roles of water and aluminum sulfate for the selective dissolution and utilization of hemicellulose for sustainable corn stover-based biorefinery development**  
Yiping Luo, D. Li, R. Li, X. Liu (CN)
- P67 Quantification of by-products from lignocellulosic biomass catalysis and utilisation of solids residues**  
George Hurst, M. Peeters, S. Tedesco (UK)
- P68 A 100 % green chemistry process for the production of 100 % value added products from lignin**  
Gibson Nyanhongu, V. Braunschmid, R. Weiss, G. Guebitz (AT)
- P69 Upcycling *Cichorium* waste and by-product biomass fractions into functional food ingredients**  
Anna Twarogowska, B. Van Droogenbroeck (BE)
- P70 Innovative processes in anaerobic digestion: Overview of the production of biohydrogen and biomolecules by mixed culture fermentation**  
E. Trably, R. Moscoviz, N. Bernet, Hélène Carrere (FR)
- P71 Eco-compatible production of ester derivatives from extracted aconitic acid**  
Pascale de Caro, P.-Y. Pontalier, X. Chasseray, A. Shum Cheong Sing (FR)
- P72 Production of protein hydrolysates with bioactivity and chitin from crab processing side streams by fermentation with marine bacteria**  
Yang Zou, J. Robbens, F.Ó. Fearghail, M. Giltrap, M. Heyndrickx, J. Debode, N. Bonner, K. Raes (BE & IE)
- P73 Valorisation of backbones from different fish species and fish processing industries**  
Carlos Bald, E. Saitúa, B. Iñarra (ES)
- P74 Improved wine-making by-product biorefinery scheme**  
Carmen Alvarez-Ossorio, M. Orive, C. Bald (ES)
- P75 Vanillin production from lignin and ferulic acid using a strain of *Amycolatopsis* sp**  
Audrey Tanghe, C. Bruni, R. Onderwater (BE)
- P76 Production of  $\alpha$ -ketoglutaric acid by engineered *Yarrowia lipolytica* strains on media containing a mixture of rapeseed oil and glycerol**  
Waldemar Rymowicz, A. Rywinska, L. Tomaszewska-Hetman, Z. Lazar, M. Rakicka-Pustułka (PL)
- P77 Production of value-added products from soybean molasses using *Yarrowia lipolytica* yeast**  
Magdalena Rakicka-Pustułka, A. Kita, W. Rymowicz (PL)
- P78 Lipid and biomass production by yeast *Yarrowia lipolytica* using brown seaweeds hydrolysate**  
Adam Dobrowolski, W. Nawijn, A.M. Mirończuk (PL)





## Social Activities

### Monday, 3 June

#### 18.30 hrs - Guided City Tour and Welcome Reception at the Botanical Gardens

Experienced city guides will take you on a fascinating walking tour. We propose to meet in front of the Capitole - the town hall - at 18.20 hrs.

The city tour will start at 18.30 hrs sharp and will end at approx. 19.30 hrs at the Botanical Gardens for a Welcome Reception.

This visit is offered to all conference participants and exhibitors wearing the official conference badge.

Address: Capitole, Place du Capitole

See map on page 106 and note on bus transport on page 106.



### Tuesday, 4 June

#### 20.00 hrs - Conference Dinner and Networking Event

The Conference Dinner will take place at the enchanting restaurant 'Les Caves de la Maréchale'. Beyond being one of the most beautiful cellars of Toulouse, this establishment is also a restaurant with an atypical setting: this former priory Saint-Romain has an authentic architecture, sublimated by a baroque and chic decoration that brings to all creates an intimate and refined atmosphere.

The Conference Dinner is NOT included in the registration fee. Separate registration is required.

Address: 3 Rue Jules Chalande



### Wednesday, 5 June

#### 14.30 hrs - Lab Visits

##### Visit of LCA & LGC

The Laboratory of Agro-industrial Chemistry (90 people) and the Laboratory of Chemical Engineering (300 people) will make you visit their facilities for the pilot-scale transformation of biomass, including: biomass gasifier, sc-CO<sub>2</sub> extraction, aqueous and solvent extraction, single and twin-screw extruders for fractionation and chemical reaction, injection-moulding of bio-based materials, electromagnetic reactor, and lots more.

The labs are located on-site – Duration of the visit: 1 hour.

This visit is not included in the registration fee. Separate registration and payment were required.

**Meeting point: Registration Desk on Level 0 at 14.15 hrs.**

##### Visit of TWB

Presentation of Toulouse White Biotechnology, followed by a visit of the technical platforms:

- Strain engineering
- Bio transformation
- Analytics

The lab is located at a 10 minutes' drive from the conference venue. Duration of the visit: 1 ½ hrs.

This visit is not included in the registration fee. Separate registration and payment were required.

**Meeting point: Registration Desk on Level 0 at 14.15 hrs.**

