15th International Conference on Renewable Resources and Biorefineries
3 - 5 June 2019 • Toulouse, France

Final Program
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<tr>
<th>Time</th>
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<th>Speakers</th>
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<tr>
<td>09.00 – 10.30</td>
<td>Registration</td>
<td>Amphi 300</td>
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<tr>
<td>10.30 – 10.45</td>
<td>Official Opening of RRB-15</td>
<td>Amphi 300</td>
<td>Christian Stevens, Ghent University, BE</td>
</tr>
<tr>
<td>10.45 – 11.15</td>
<td>Keynote Lecture 1</td>
<td>Salles de Thèses - Session 1A</td>
<td>Agnes Borg, Director, Industrial Biotechnology at EuropaBio - the European Association for Bioindustries</td>
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<tr>
<td>11.15 – 12.00</td>
<td>Keynote Lecture 2</td>
<td>Salles de Thèses - Session 1B</td>
<td>Steven Abbott, TCNF Ltd, UK and Lorie Hamelin, University of Toulouse, FR</td>
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<tr>
<td>12.00 – 13.00</td>
<td>Lunch</td>
<td>Salles de Thèses - Session 1C</td>
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<tr>
<td>13.00 – 14.30</td>
<td>Amphi 300: Parallel Sessions</td>
<td>Amphi 300</td>
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<tr>
<td>13.00 – 13.30</td>
<td>Biomass fractionation</td>
<td>Amphi 300</td>
<td>Pierre-Yves Pontalier, University of Toulouse, FR</td>
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<tr>
<td>13.30 – 13.55</td>
<td>Biocatalysis for bioresource transformation – I</td>
<td>Amphi 300</td>
<td>Magali Remaud Simeon, University of Toulouse, FR</td>
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<tr>
<td>14.20 – 14.30</td>
<td>Acidification of spent coffee grounds</td>
<td>Amphi 300</td>
<td>Joana Pereira, Universidade de Aveiro, PT</td>
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<td>14.30 – 15.25</td>
<td>Microbial research – High-throughput micro fermentations</td>
<td>Amphi 300</td>
<td>Sebastian Blum, Director, Sales Europe, m2p-labs GmbH, DE</td>
</tr>
<tr>
<td>15.15 – 15.25</td>
<td>Keynote Lecture 2</td>
<td>Amphi 300</td>
<td>Wim Soetaert, CEO Bio Base Europe Pilot Plant, BE</td>
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<tr>
<td>15.25 – 15.45</td>
<td>Keynote Lecture 4</td>
<td>Amphi 300</td>
<td>Wim Soetaert, CEO Bio Base Europe Pilot Plant, BE</td>
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**Monday, 3 June 2019**

**Opening Plenary Session**

Chair: Carlos Vaca Garcia, University of Toulouse, FR

**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

- **10.30 – 10.45**
  - 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

- **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

**Parallel Sessions**

- **Amphi 300 – Session 1A**
  - Biomass fractionation
    - Pierre-Yves Pontalier, University of Toulouse, FR
  - Biocatalysis for bioresource transformation – I
    - Magali Remaud Simeon, University of Toulouse, FR

- **Amphi 100 – Session 1B**
  - Integrated approach for the development of industrial hemp: From the field to the composite material
    - Stefan Spirk, TU Graz, AT
  - Biocatalysis for bioresource transformation – II
    - Simo Sarkanen, University of Minnesota, USA

- **Salle de Thèses – Session 1C**
  - Thin films from wood-based polymers
    - Ugis Cabulis, Latvian State Institute of Wood Chemistry, LV
  - Biocatalysis for bioresource transformation – II
    - Caroline Rémond, Université de Reims Champagne-Ardenne, FR

**Monday, 3 June 2019**

- **09.00 – 10.30**
  - Registration

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

- **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
<table>
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<tr>
<th>Time</th>
<th>Session A</th>
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<th>Session C</th>
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<tbody>
<tr>
<td>15.45 – 16.15</td>
<td>Parallel sessions</td>
<td>Eco-driven production of bioactive compounds with ERI 360° standard scoring tool</td>
<td>Integration of cellulosic biomass to biofuel conversion in the steel industry</td>
</tr>
<tr>
<td>16.15 – 16.40</td>
<td>Evaluation of formaldehyde and total volatile organic compounds emissions of fiberboards resulting from a coriander biorefinery versus commercial wood-based building materials</td>
<td>Effect of soluble phenolic compounds from hydro-thermally pretreated wheat straw on cellulose hydrolysis</td>
<td>Bioethanol production by Enterobacter A47: A proof-of-concept</td>
</tr>
<tr>
<td>16.40 – 17.05</td>
<td>Post-treatment of oxidized lignin for versatile dispersants using membrane filtration</td>
<td>Production of phenazines by the bacterium Pseudomonas chlororaphis using glycerol</td>
<td>Optimizing biomethane production across the whole value chain</td>
</tr>
<tr>
<td>17.05 – 17.15</td>
<td>Designing multi-copper oxidases for bio-transformation and upgrading of lignin</td>
<td>Mimosa tenuiflora extract inhibits aflatoxin B1 synthesis</td>
<td>Screening of pretreatment and hydrolysis strategies for biofuel production</td>
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**Guided city walking 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**

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<th>Time</th>
<th>Session A</th>
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<th>Session C</th>
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<tbody>
<tr>
<td>09.00 – 09.30</td>
<td>The Feedstock-Conversion Interface Consortium: Providing innovative solutions to address operational challenges faced by biorefineries</td>
<td>Recent advances in biorefineries</td>
<td>Preparation of D-excess-lactic acid by simultaneous dissolution and transformation of cellulose and hemicellulose in biomass by yttrium species</td>
</tr>
<tr>
<td>09.30 – 10.20</td>
<td>Simultaneous process and utility optimization in biorefinery processes</td>
<td>Non-traditional biomass utilization: A biorefinery perspective for the United Arab Emirates</td>
<td>Biorefining with low-cost ionic liquids: chemicals, fuels and economics</td>
</tr>
<tr>
<td>10.20 – 10.30</td>
<td>Fungal pretreatment on solid fraction of digestate to enhance its reuse as a feedstock for anaerobic digestion plants</td>
<td>Research on olive derived biomass as a renewable source of energy, chemicals and materials</td>
<td>Biobased emulsions including platform molecule derivatives for biocontrol applications</td>
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**Coffee Break**
### 11.15 - 12.45 Parallel sessions

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<th>Salle de Thèses - Session 4C</th>
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<tr>
<td>Biocatalysis for bioresource transformation – II</td>
<td>Pretreatment and transformation of lignocellulosics - II</td>
<td>CO₂ utilization</td>
</tr>
<tr>
<td>Chair: Tom Desmet, Ghent University, BE</td>
<td>Chair: Philippe Tavernier, Development Agency of West Flanders (POM West Flanders), BE</td>
<td>Chair: Stéphane Guillon, University of Toulouse, FR</td>
</tr>
<tr>
<td>11.15 – 11.45 Development and characterization of multi-enzymatic system for lignocellulose degradation</td>
<td>11.15 – 11.45 Biotechnological production of polyols through conversions of crude glycerol by newly isolated strains of the yeast Yarrowia lipolytica</td>
<td>11.15 – 11.45 Biological methanation: A new opportunity to recycle CO₂ into green energy</td>
</tr>
<tr>
<td>Claire Dumont, University of Toulouse, FR</td>
<td>Eleni-Stavroula Vastarouchou, Agricultural University of Athens, GR</td>
<td>Viviana Contreras Moreno, ENOSIS, FR</td>
</tr>
<tr>
<td>11.45 – 12.10 Towards the in house production of enzymes using processing waste</td>
<td>11.45 – 12.10 Selective recovery of acetic acid from biomass by subcritical water pretreatment</td>
<td>11.45 – 12.10 Carotenoid extraction from mango (Mangifera indica) waste via supercritical CO₂: Process optimization, kinetics and bioactive properties</td>
</tr>
<tr>
<td>Renate Weiss, University of Natural Resources and Life Sciences (BOKU), AT</td>
<td>Giuliano Oragone, Technical University of Denmark, DK</td>
<td>José Villacís-Chiriboga, National Technical University of Athens, GR</td>
</tr>
<tr>
<td>12.10 – 12.35 Mechanism of enzymatic degradation of plant agricultural by-products under variable solid loadings conditions</td>
<td>12.10 – 12.35 Production of medium-chain length polyhydroxyalkanoates from grape pomace sugar-rich hydrolysates obtained by subcritical water hydrolysis</td>
<td>12.10 – 12.35 Technoeconomic evaluation on the holistic conversion of biomass to levulinic acid</td>
</tr>
<tr>
<td>Estelle Bonnin, INRA, FR</td>
<td>Juliana B Silva, Universidade Nova de Lisboa, PT</td>
<td>Andreas-Faidon Pateromichelakis, National Technical University of Athens, GR</td>
</tr>
<tr>
<td>12.35 – 12.45 Enzymatic hydrolysis of Poly(ethylene 2,5-furanate)(PEF)</td>
<td>12.35 – 12.45 Ligninolytic potential of Thermobacillus xylanilyticus for the production of aromatic molecules</td>
<td>12.35 – 12.45 Coupling power-to-gas and biomass-to-gas systems: Application to the Occitanie region, France</td>
</tr>
<tr>
<td>Simone Weinberger, University of Natural Resources and Life Sciences Vienna, AT</td>
<td>Quentin Czerwiec, FARE Laboratory, INRA, FR</td>
<td>Eduardo Carrera, University of Toulouse, FR</td>
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12.45 – 13.30 Lunch

13.30 – 14.30 Poster Tour 1

### 14.30 - 16.00 Parallel sessions

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<tr>
<td>Thermochemical transformations of biomass</td>
<td>Horizon 2020</td>
<td>Sustainability and circular economy</td>
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<tr>
<td>Chair : Thierry Ribeiro, Institut Polytechnique UniLaSalle, FR</td>
<td>Chair: Volker Heil, Fraunhofer UMSICHT, DE</td>
<td>Chair: Philippe Tavernier, Development Agency of West Flanders (POM West Flanders), BE</td>
</tr>
<tr>
<td>14.30 – 15.00 Unravel mechanisms in the thermochemical conversion of biowaste and biomass</td>
<td>14.30 – 15.00 Social dimensions of biofuel and alternative fuel production and use in Europe</td>
<td>14.30 – 15.00 Integrating a biorefinery into a Kraft pulping mill for the production of second generation bioethanol</td>
</tr>
<tr>
<td>Ange Nzhou, Laboratoire Rapsodee &amp; École des Mines d’Albi, FR</td>
<td>Yara Evans, Imperial College London, UK</td>
<td>Ana M.R.B. Xavier, Universidade de Aveiro, PT</td>
</tr>
<tr>
<td>15.00 – 15.25 Upgrading hydrothermal liquefaction biocrude derived from lignocellulosic biomass to drop-in biofuels</td>
<td>15.00 – 15.25 The BABET-REAL5 project – Sustainable biofuel production</td>
<td>15.00 – 15.25 Circular Economy: Increasing the value of selected municipal and industrial waste streams into biofuels and biocoal</td>
</tr>
<tr>
<td>Kamaldeep Sharma, Aalborg University, DK</td>
<td>Gérard Vilarem, Institut National Polytechnique de Toulouse, FR</td>
<td>Roland Verhé, Renasci, BE</td>
</tr>
<tr>
<td>15.25 – 15.50 Demonstration of a continuous TORWASH® pilot plant for sewage sludge: Thermal treatment, dewatering and effluent processing</td>
<td>15.25 – 15.50 Advanced biomass catalytic conversion to middle distillates in molten salts</td>
<td>15.25 – 15.50 Developing a sustainable route to a yeast-based palm oil alternative: The role of Life Cycle Assessment (LCA) and Techno-Economic Analysis (TEA)</td>
</tr>
<tr>
<td>Pavlina Nanou, ECN part of TNO, NL</td>
<td>Homer Genuino, Engineering and Technology institute Groningen (ENTEG), NL</td>
<td>Sophie Parsons, University of Bath, UK</td>
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<tr>
<td>15.50 - 16.00 The effect of bark biochar on peat based growing mediums</td>
<td>15.50 – 16.00 To-Syn-Fuel: Turning sewage sludge into fuels and hydrogen</td>
<td>15.50 - 16.00 The industrial production of renewables-based propylene glycol: An environmental sustainability perspective</td>
</tr>
<tr>
<td>Dilani Rathnayake, Ghent University, BE</td>
<td>Jan Grunwald, Fraunhofer UMSICHT, DE</td>
<td>Pieter Nachtgaelae, Ghent University, BE</td>
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15.50 – 16.00 Lunch
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<th>Session 7C</th>
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<tr>
<td>16.30 – 17.00</td>
<td>Hemicellulose and protein integration in sustainable biorefineries</td>
<td>Small and highly efficient hydrothermal liquefaction (HTL) units for scalable mass</td>
<td>Selective hydrogenation of lignin-derived phenols to cyclohexanols over Pd/Al2O3 in</td>
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<td></td>
<td>Solange Mussatto, DTU Biosustain, DK</td>
<td>implementation in biomass conversion</td>
<td>aqueous phase</td>
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<tr>
<td>17.00 – 17.25</td>
<td>An efficient process for the enzymatic conversion of pretreated Pinus radiata into wood</td>
<td>Paludiculture in a Mediterranean peatland: Energy yields from anaerobic digestion of three</td>
<td>Direct electrochemical extraction of bio-based sucinic acid by a genetically engineered</td>
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<td></td>
<td>sugars and their application in the production of polyhydroxylalkanoates</td>
<td>perennial energy crops</td>
<td>yeast strain Yarrowia lipolytica through valorisation of municipal solid waste</td>
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<tr>
<td></td>
<td>Alankar Vaidya, Scion, NZ</td>
<td>Federico Dragoni, Institute of Life Sciences, IT</td>
<td>Eleni Stylianou, Agricultural University of Athens, GR</td>
</tr>
<tr>
<td>17.25 – 18.00</td>
<td>The Mp2 project: Producing a palm oil substitute from waste feedstocks through a one-step</td>
<td>On the systematic analysis and design of HTL reactors that combine industrial-scale experiments</td>
<td>Two-phase high-pressure CO\textsubscript{2}-H\textsubscript{2}O system as reactional and</td>
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<td>microwave process with Metchtsnickowia pulcherimina</td>
<td>and model-based technology</td>
<td>extracting medium for biomass conversion</td>
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<tr>
<td>18.00 – 18.30</td>
<td>Optimisation of a process for the production of bio-vanillin from corn fibre</td>
<td>Catalytic upgrading of straw-based ablative fast pyrolysis vapours in a downstream fixed-bed</td>
<td>Development of an integrated and scalable process for continuous valorization of dilute</td>
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<td></td>
<td>Rita Valério, Universidade Nova de Lisboa, PT</td>
<td>reactor</td>
<td>volatile fatty acids from CO\textsubscript{2}</td>
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20.00 Conference Dinner and Networking Event at Les Caves de la Maréchale (see page 104)

**Wednesday, 5 June 2019**

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<tr>
<td>09.00 – 09.30</td>
<td>Biochar-supported solid catalysts for achieving sustainable biorefineries</td>
<td>Prebiotics production from underutilized agriculture and marine resources</td>
<td>Integral Valorization of <em>Chlorella protothecoides</em> Biomass In a Biorefinery Framework</td>
</tr>
<tr>
<td></td>
<td>Daniel C.W. Tsang, Hong Kong Polytechnic University, CN</td>
<td>Eva Nordberg Karlsson, Lund University, SE</td>
<td>Christine Raeymaekers, University of Lüneburg, DE</td>
</tr>
<tr>
<td>09.30 – 09.55</td>
<td>The Integrated Biorefineries: Optimisation biocconversion of tropical biomass feedstock for</td>
<td>Production of lactic acid from the organic fraction of municipal solid wastes using *B.</td>
<td>Green macroalgae biorefinery: Extracting valuable components from <em>Ulva lactuca</em></td>
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<td>producing value added chemicals and biogas</td>
<td><em>coagulans</em></td>
<td>Karla Dussan, Biomass &amp; Energy Efficiency Group, NL</td>
</tr>
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<td></td>
<td>Irima Nuriya, Universitas Brawijaya, ID</td>
<td>J. Pablo López-Gómez, Leibniz Institute for Agricultural Engineering and Bioeconomy, DE</td>
<td></td>
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<tr>
<td>09.55 – 10.20</td>
<td>Graphite/graphene oxide-supported lewis acids for catalytic glucose isomerisation in a</td>
<td>CichOpt: Optimal use and valorization of biomass streams from <em>Cichorium</em></td>
<td>Understanding natural flocculation mechanisms in microalgae to enhance flotation harvesting</td>
</tr>
<tr>
<td></td>
<td>biorefinery</td>
<td>Jeroen van Aukel, Wageningen Plant Research, NL</td>
<td>efficiency</td>
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<tr>
<td>10.20 – 10.30</td>
<td>Winery wastes as feedstock for the production of succinic acid, bacterial cellulose and value</td>
<td>Unlocking the potential of low-quality feedstocks for cost-effective production of</td>
<td>Cécile Formosa-Dague, Université de Toulouse, FR</td>
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<td>added products</td>
<td>biofuels: A case study for animal bedding</td>
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<td></td>
<td>Katiana Philippi, Agricultural University of Athens, GR</td>
<td>Miguel Sanchis-Sebastiá, Lund University, SE</td>
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10.30 – 11.30 Coffee Break & Poster Tour 2
11.30 – 12.00 Parallel sessions

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<tr>
<td>Metabolic engineering of cell factories</td>
<td>Valorization of biomass waste streams - II</td>
<td>Biosurfactants</td>
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<tr>
<td>Chair: Isabelle Meynial, University of Toulouse, FR</td>
<td>Chair: Christelle Guiguil, University of Toulouse, FR</td>
<td>Chair: Wim Soetaert, Ghent University, BE</td>
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<td>11.30 – 12.00</td>
<td>11.30 – 12.00</td>
<td>11.30 – 12.00</td>
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<tr>
<td>From fuels to fragrances - Lessons learned and new approaches for prokaryotic cell factories</td>
<td>Opportunities and hurdles towards closed loop recycling of plastics present in mixed organic waste streams from anaerobic digestion plants</td>
<td>Bringing tailor-made biosurfactants from lab to market</td>
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<tr>
<td>Patrik Jones, Imperial College London, UK</td>
<td>Steven De Meester, Ghent University, BE</td>
<td>Sophie Roelants, InBio.be - Ghent University &amp; Bio Base Europe Pilot Plant, BE</td>
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<td>12.00 – 12.25</td>
<td>12.00 – 12.25</td>
<td>12.00 – 12.25</td>
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<tr>
<td>Membrane transport as crucial screw for metabolic engineering of microbial cell factories</td>
<td>Understanding lignin co-pyrolysis with silicon nanoparticles for applications in lithium-ion batteries</td>
<td>Mannosylerythritol lipids: Biosurfactants with a high molecule structure variability</td>
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<tr>
<td>Michael Sauer, University of Natural Resources and Life Sciences Vienna, AT</td>
<td>Jian Shi, University of Kentucky, USA</td>
<td>Susanne Zibek, Fraunhofer IGB, DE</td>
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<tr>
<td>12.25 – 12.50</td>
<td>12.25 – 12.50</td>
<td>12.25 – 12.50</td>
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<tr>
<td>Comprehensive study on Escherichia coli genomic expression: does position really matter?</td>
<td>Inherent metals of phytoremediation plant influences its recyclability by hydrothermal liquefaction</td>
<td>Interactions of food proteins with biosurfactants and emulsifiers</td>
</tr>
<tr>
<td>Anke Goormans, Ghent University, BE</td>
<td>Shicheng Zhang, Fudan University, CN</td>
<td>Karina Salek, Herlot-Watt University, UK</td>
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<tr>
<td>12.50 – 13.00</td>
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<td>12.50 – 13.00</td>
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<tr>
<td>Adaptive laboratory evolution restored solvent tolerance in the plasmid-cured Pseudomonas putida S12</td>
<td>Towards biocatalytic lignin valorization: Interactions between laccase and aqueous ionic liquids</td>
<td>Synthesis of a new organocatalyst biosourced surfactant</td>
</tr>
<tr>
<td>Hadastiri Kusumawardhani, Leiden University, NL</td>
<td>Joseph Stevens, University of Kentucky, USA</td>
<td>Clément Giry, ENSIACET-INP, FR</td>
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Closing Ceremony
Philippe Tavernier, Development Agency of West Flanders (POM West Flanders), BE
11.30 – 13.05
Presentation of the 8th Golden Crop Award
13.05 – 13.15
Presentation of the Best PhD Short Communication Awards
Erick Vandamme, Ghent University, BE
13.15 – 13.30
Closing Remarks and Presentation of RRB-16
Philippe Tavernier, Development Agency of West Flanders (POM), BE
13.30
Farewell Lunch
14.30 – 16.00
Optional lab visits (see page 105)
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. Kruse (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, sustainable 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. Ronse, W. Prins, M. Pala, R.-U. Dietrich, S. Estelmann, M. Sedin, J. Rosdahl, M. Bonaiauto, 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 Mudryniec, D. Bamer, 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. Lueebbert, 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 Stökle, B. Hülsemann, P.J. Arauzo, Z. Cao, A. Kruse (DE)

P25 Catalytic pyrolysis of wood and lignocellulosic for 1,6-anhydrosugars formation
Avvas Zhurina, G. Dobele, A. Volperts, V. Jurkane, K. Melle, J. Zoldners (LV)

P26 Applying design of experiments (DOE) to study effects of feed on butanol production of Clostridium saccharoperbutylicum
Florian Gattermayr, V. Leibner, T. Dietler (AT)

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

P28 Biorefinery development from apple waste streams and succinic acid production by genetically engineered Yarrowia lipolytica
Katana Philipps, 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. Deilai, O. Merah (DZ & FR)

P30 Integration of next generation biosurfactant production into biorefinery processes

P31 Pastel (Isatis tinctoria) a typical “Occitanian” plant for bio refinery purposes
Gérald Vilarin, 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. Elliä, S. Poikkimäki, M. Rinne, M. Nappa, R. Lantto, M. Sika-aho (FI)

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

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

P35 Evaluating yeast strains for malic acid utilisation in a biorefinery application
Annica Stego, M. Vlijmen-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

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

P39 Effect of C/N ratio on arabitol and lipid production by the yeasts Debaryomyces Hansenii and Rhodosporidium toruloides
Rosaria Filippou, S. Michou, E. Vastaroucha, K. Mordini, S. Papanikolaou (GR)
### Chemical platform molecules

**P40** The promotion effect of NaCl on the conversion of xylene 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  
Anell 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. Guí, C. Wisniewski, M. Delalonde (FR)

**P43** Continuous downstream extraction process for recovery of acetic acid from dilute aqueous solutions with supercritical CO₂  
Astrid Novella, S. Camy, J.-S. Cordoret (FR)

### Metabolic engineering of cell factories

**P44** Comprehensive study on *Escherichia coli* genomic expression: Does position really matter?  

**P45** Adaptive laboratory evolution restored solvent tolerance in the plasmid-cured *Pseudomonas putida* S12  
Haladiith 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 Lafia, J. Morchain, A. Ahmadi, L. Barna, P. Guiraud (FR)

**P47** Integral valorization of *Chlorella protothecoides* biomass in a biorefinery framework  

**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 Egenes, I. Sigurnjak, I. Regelink, O. Schoumans, E. Michels, E. Meers (BE & NL)

### Pretreatment and transformation of lignocellulosics

**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  
Hongpham Luo, I. Sigurnjak, E. Michels, E. Meers (BE)

### Sustainability & the circular economy

**P55** Ligninolytic potential of *Thermobacillus xylanilyticus* for the production of aromatic molecules  
Quentin Czerny, B. Chalbert, V. Aguié-Béghin, C. Ivaldi, B. Kurek, H. Rakotobarinona (FR)

**P56** Improvement of fermentation of process lyes from pulp industry by its detoxification by UV irradiation  

**P57** Comparison of dilute acid pretreatments for sugar production from olive biomass  
Encarnación Ruiz, J.M. Romero-García, M.J. Díaz-Villanueva, Efugio Caseto (ES)

**P58** Consequences of dry pretreatments on lignocellulose features, digestibility and functional activity of a hydrolytic microbial consortium: Macro-kinetic and metaprotomic assessment  
Guillermina Hernandez-Raquel, E. Flajollet, A. Lazuka, N. Jehmlich, B. Henriissat (FR & DE)

**P59** Bagasse extracts fractionation  
Pierre-Yves Pontailler, V. Orize, J. Peydecastaing (FR)

### Thermalchemical transformations of biomass

**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)

**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. Gistelinck, 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 Nyanhongo, 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. Robbers, P.O. Fearghal, 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. Saltúa, 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 Tanque, C. Bruni, R. Onderwater (BE)

P76 Production of α-ketoglutaric acid by engineered Yarrowia lipolytica strains on media containing a mixture of rapeseed oil and glycerol

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. Mironczuk (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-CO₂ 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.