

SCIENTIFIC

MEETING in

**AGROSCIENCES
ENVIRONMENT
BIOTECHNOLOGIES
AND BIOECONOMY**

REIMS
19 March 2018



Objectives

Respective presentations of both Universities and exchanges about crucial and inspiring issues on plant based bioeconomy. Related topics common to both institutes such as sustainable production of plant biomass, bio-based products, innovative processes and socio-economic aspects will be investigated. This meeting has been designed to permit our respective researchers to introduce themselves and to know each other in order to build collaborative projects in case of mutual interests are identified.

PROGRAMME

MONDAY 19TH MARCH 2018

8.00 a.m. Welcome of the participants

Reims City Hall (*9 Place de l'Hôtel de Ville, 51100 Reims*)

8.15 a.m. Opening session

- Pascal LABELLE (Deputy Mayor of Reims, in charge of Culture and Heritage)
- Prof. Dr Ernst SCHMACHTENBERG (Rector of RWTH)
- Prof. Guillaume GELLE (President of the URCA)

Presentation of the favourable ecosystems for bioeconomy development

- Heyke SLUSARCZYK (BioSC central office, Research Center Jülich)

Bioeconomy Science Center

- Christophe CLEMENT (URCA)

RFS Condorcet - RF CNRS 3417

9.00 a.m. Session 1 - Sustainable production of plant-based biomass taking into account the diverse, interacting paths of its utilization while safeguarding the environmental resources soil and water

- Felix JAKOB (RWTH)

Green release for plant health

- Ulrich SCHAFFRATH (RWTH)

Elucidating the framework of plant-fungus interactions - from molecular analyses towards integrated plant protection

- Essaid AIT BARKA (URCA)

Biocontrol against plant pathogen and abiotic stresses using micro-organisms and derived elicitors

- Claudia COSIO (URCA)

Impact of organic and inorganic pollutants to aquatic biota

- Emmanuel GUILLON (URCA)

Fate of organic and inorganic pollutants in the environment

10.15 a.m. Coffee Break

10.45 a.m. Session 2 - Chemical and microbial transformation of bio-based resources into valuable materials

- Nick WIERCKX (RWTH)

Metabolic engineering of smut fungi for the production of organic acids

- Anne LUNZE (RWTH)

*Analysis of the composition of the genus *Silphium* for pharmaceutical and biorefinery usage*

- Judith LOOGEN (RWTH)

*Efficient evaluation of cellulose digestibility by *Trichoderma reesei* Rut C30 and other cellulolytic fungi in online monitored shake flasks*

- Bernard KUREK (URCA)

Innovation for the valorisation of fiber-plants

- Caroline REMOND (URCA)

Enzymatic recovery of pentoses from lignocellulosic biomass and their enzymatic functionalization into surfactants and biologically active pentosides

- Gabriel PAES (URCA)

Modelling enzymatic deconstruction of lignocellulosic biomass

- Florent ALLAIS (AgroParisTech)

Chemo-enzymatic functionalization of lignocellulose-derived building blocks: an access to sustainable additives, monomers and polymers

- Norbert HOFFMANN (URCA)

Novel surfactants obtained from biomass-derived furans

12.15 Lunch *Hôtel de ville*

2.00 p.m. Session 3 - Chemical engineering technologies for the transformation of bio-based resources in integrated processes

- Philip GRANDE (RWTH)

Advanced pulping for perennial plants: a holistic and sustainable integrated lignocellulose biorefinery concept

- Tim MAßMANN (RWTH)

Biotechnological production of itaconic acid via extractive in-situ product removal

- Jochen BÜECHS (RWTH)

Partially replacing stirred lab-scale bioreactors by highly parallelized shaken bioreactors with online monitoring

- Xavier COQUERET (URCA)

Radiation and photochemical processing of biobased materials

- Patrick PERRE (CentraleSupElec)

Upscaling/downscaling in processes and bio-processes: synergy between experimentation and modelling

- Philippe JEANDET (URCA)

New insights in the bioproduction of monomeric and oligomeric phytostilbenes by plant cell systems and evaluation of their biological activity

- Sandrine BOUQUILLON (URCA)

Biobased compounds for encapsulation purposes



3.30 p.m. Coffee Break

4.00 p.m. Session 4 - Analysis, evaluation of economic conditions for and societal effects of a bio-based economy

- Larissa DORÉ (RWTH)

Biofuels: legal measures and multicriteria evaluation

- Sara CRAWFORD (RWTH)

Effect-based tools, green toxicology and LCA: strategies to evaluate the risks of biobased materials

- Martino NIEDDU (URCA)

A reflexion of social scientist on Marquardt and al. (2010) : biorefinery's "one best way" or explorations of a technological portfolio of alternatives in Biomass transformations?

- Nicolas BEFORT and Stéphane LHUILLERY (Neoma Business School)

Which industrial strategy for which bioeconomy?

4.40 p.m. Session 5 - Bioeconomy and numerical sciences

- Ali BAKIRI (URCA)

Reconstruction of HMBC correlation networks: a novel NMR-based contribution to metabolite mixture analysis

- Andrea KÖNIG (RWTH)

Design of optimal biorefinery processes and associated biomass supply chains

- Arnaud RENARD (URCA)

ROMEIO HPC Ecosystem for bioeconomy and numerical sciences

5.30 p.m. Closing Address

- Laurent LUCAS (Vice-President for Research - URCA)

