

Newsletter

Number 3

July 2014


www.sunlibb.eu

▲ Maize leaves, in the sunshine.

Welcome to the third SUNLIBB newsletter

The SUNLIBB project is funded under the EU Seventh Framework Programme (FP7) within the Energy theme: Second Generation Biofuels – EU Brazil Coordinated Call. SUNLIBB started on 1st October 2010 and will run until the end of September 2014. It collaborates with a parallel project called the Center Of Biological and Industrial Process for Biofuels (CeProBio), in Brazil.

New consortium partner

We are pleased to announce that Biotech Consultants Ltd. (BTCL) has been formally accepted by the EC as a partner in the SUNLIBB consortium. BTCL (SUNLIBB partner 14) will continue the work started by Biocaldol, optimising pilot scale fermentation of sugars from maize and miscanthus biomass (deliverable 7.5).

Project management changes

Many members will already be aware that Dr. Anne Readshaw (University of York) replaced Dr. Veronica Ongaro as Project Manager of SUNLIBB at the end of January 2014. Anne initially trained as a plant pathologist in industry, before studying for a PhD in molecular genetics of plant development in Prof. Ottoline Leyser's lab at York. She has subsequently worked as a Post-Doc. Research Associate in the Leyser Lab and in the Bruce Group in CNAP, University of York, before taking on the Project Management role at SUNLIBB.

SUNLIBB also has a new Project Officer at the European Commission; Dr. Thomas Schleker PhD.

International Showcase Event

Elke Theeuwes from Ecover (SUNLIBB partner 5) and Ioanna Dimitriou from the University of Sheffield (SUNLIBB partner 11) represented SUNLIBB at the European Biomass Conference and Exhibition in Hamburg in June 2014. They displayed 4 posters, delivered a talk and distributed leaflets explaining the aims and objectives of SUNLIBB and the progress made in the Project so far. Posters were provided by Anne Readshaw, Leo Gomez and Tom Attard from the University of York (SUNLIBB partner 1) and Elke Theeuwes. Copies of the posters and other distribution material can be found on the SUNLIBB website (www.sunlibb.eu).

Appointments

Since the last newsletter, Dr. Ioanna Dimitriou has joined the SUNLIBB team as a Post-Doc. Research Associate at the University of Sheffield, working with Prof. Phillip Wright in Work Package 7 on process design and modelling of biorefinery systems. Find out more about Ioanna's background and interests at: www.sheffield.ac.uk/cbe/people/pgr/idimitriou.

Dr. Nicola Favretto has joined the Project at the University of Leeds (SUNLIBB partner 10) as a Post-Doc. Research Fellow, working with Prof. Lindsay Stringer in Work Package 8 on sustainability policy and guidelines on biofuels.



Maresias 2014 ▲

SUNLIBB/CeProBio Project Meetings


Project Review meetings have been held in Maresias, São Paulo, Brazil, from 18th to 21st March 2013 and from 17th to 20th March 2014.

A Project Review meeting was held in Wageningen, The Netherlands, from 25th to 27th September 2013.

The next Project Review meeting will be held in Ghent, Belgium, from 16th to 19th September 2014.

There will also be a final Project Review Meeting, for Work Package Leaders only, in Brussels in November 2014 (date to be arranged).



EU BC&E 2014 
22nd European Biomass Conference and Exhibition
 CCH - Congress Center Hamburg, Germany • 23 - 26 June 2014



Exchanges between SUNLIBB and CeProBIO



Mathias Sorieul (2nd on left) from the University of Cambridge; at the University of São Paulo, 2014

Since the last newsletter was published, there have been several constructive exchange visits between European and Brazilian partners.

Nicola Favretto from the University of Leeds, visited Prof. Marcos Buckeridge for 6 weeks at the University of São Paulo (USP). The

purpose of the visit was to conduct interviews with relevant stakeholders in São Paulo, Rio de Janeiro and Brasília, with regard to EU-Brazil co-operation on second generation biofuels. In addition, data were gathered with respect to bilateral biofuels promotion activities in African countries.

Dr. Leonardo Gomez (CNAP, York; SUNLIBB partner 1) visited the CTBE (Laboratório Nacional de Ciência e Tecnologia do Bioetanol) and Prof. Igor Polikarpov's laboratory at the University of São Paulo, in June 2013.

Dr. Mathias Sorieul (University of Cambridge; SUNLIBB partner 9) spent 3 weeks at the USP in March/April 2013. He used the P6 Biogel columns available at the USP to isolate large oligosaccharides released from digestion of *Miscanthus* stems and sugarcane bagasse. Mathias also learned a protocol routinely used at the USP; the preparation of delignified hemicellulose. This procedure is now being used at Cambridge.

Mathias visited the University of São Paulo again in 2014. He set up the USP's first DASH experiment (DNA sequencer-Assisted Saccharide analysis in High throughput). This technique was developed at Cambridge and allows the rapid analysis of cell wall oligosaccharides. After a few optimisations, the experiment was running successfully.

Dr. Stavros Afionis (University of Leeds) will visit Prof. Marcos Buckeridge at the USP for 3 weeks in August 2014. The purpose of the visit will be to conduct follow-up interviews with relevant stakeholders in São Paulo, Rio de Janeiro and Brasília, with regard to EU-Brazil cooperation on second generation biofuels.

Stavros also presented a paper on Brazil-EU biofuels cooperation in Africa, during the 'Green Economy in the South' conference that took place in Dodoma, Tanzania, in July 2014.



Above left: *Miscanthus*.
Above right: Sugar cane.
Photos; Luisa Trindade
Left: *Zea mays*. Albrecht Meyer 1542

Recent SUNLIBB/CeProBIO Publications

"Side by side comparison of chemical compounds generated by aqueous pretreatments of maize stover, miscanthus and sugarcane bagasse." Gomez, L. G. *et al*, (2014) *Bioenerg. Res.*

"The pattern of xylan acetylation suggests xylan may interact with cellulose microfibrils as a two-fold helical screw in the secondary plant cell wall of *Arabidopsis thaliana*." Busse-wicher, M. *et al* (2014) *The Plant Journal* (Epub ahead of print).

"The potential of C4 grasses for cellulosic biofuel production." Van der Weijde, T. *et al* (2013) *Front Plant Sci* 4:107

"Lignification in sugarcane: biochemical characterization, gene discovery and expression analysis in two genotypes contrasting for lignin content." Bottcher, A. *et al* (2013) *Plant Physiol.* 163:1539-57

"Evaluating the composition and processing potential of novel sources of Brazilian biomass for sustainable biorenewables production." Lima, M.A. *et al* (2014) *Biotechnology for Biofuels* 7:10

"Microwave-enhanced formation of glucose from cellulosic waste." Fan, J. *et al* (2013) *Chemical Engineering & Processing: Process Intensification.* 71:37-42

"Developing sustainable biofuels." McQueen-Mason, S.J. (2013) *Pan European Networks* 7:244-245.

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Ghent Biobased Economy Summer School 2014

What: Integration of green and white biotechnology: from plant to product!

When: August 25th – 28th 2014

Where: Ghent University

Who: Pre/Post-doctoral and industrial researchers

Info: www.gbessummerschool.be

The 2nd SUNLIBB Policy Brief (compiled in September 2013 by S. Afionis and L. Stringer) is publicly available for download from the SUNLIBB website.