SUNLIBB Objectives

Improve feedstock quality, in order to reduce the high economic costs associated with converting biomass to second generation bioethanol.

Add value to the overall process of conversion in biomass biorefining, by upgrading residues and by-products and producing other value streams from the feedstock, in addition to bioethanol.

Enhance the economic sustainability of second generation biomass by bringing together in model (or pilot) biorefineries our improved feedstock, enhanced conversion processes and added-value product extractions.

Improve the conversion process by which we produce sugars for fermentation.

Ensure that the new processes developed fulfil sustainability requirements by reducing GHG emissions, cutting other forms of air pollution, having minimal impacts on local environments and biodiversity, building sustainable rural industries and not impacting on food production or prices.

European Consortium Partners

- University of York, CNAP, UK.
- University of York, Green Chemistry, UK.
- Borregaard, Norway.
- Biogemma, France.
- Ecover, Belgium.
- INRA, France.
- North Energy Associates Ltd, UK.
- Processum, Sweden.
- University of Cambridge, UK.
- University of Leeds, UK.
- University of Sheffield, UK.
- VIB, Belgium.
- Wageningen University, The Netherlands.
- Biotech Consultants Ltd, UK.

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SUNLIBB

Sustainable Liquid Biofuels

from

Biomass Biorefining

www.sunlibb.eu

What is SUNLIBB?

SUNLIBB is an EU-funded consortium project, working to overcome technical barriers to second-generation bioethanol production.

SUNLIBB brings together key researchers and industrial innovators working in areas such as feedstock improvement, pre-treatment and saccharification, generation of added-value products (especially from lignin) and fermentation.

The work is focused on 3 closely-related grasses; maize, miscanthus and sugarcane, which are major bioenergy crops in Europe and Brazil.

SUNLIBB collaborates closely with a sister consortium in Brazil (CeProBIO). This cooperation provides an opportunity for some of the best researchers in our respective regions to work together on a globally important issue.

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SUNLIBB/CeProBIO Publications

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"Microwave-enhanced formation of glucose from cellulosic waste." Fan, J., De Bruyn, M., Zhu, Z., Budarin, V., Gronnow, M.J., Gomez, L.D., Macquarrie, D.J. & Clark, J.H. (2013) Chemical Engineering & Processing. 71:37-42

SUNLIBB/CeProBIO Publications

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"Effects of pretreatment on morphology, chemical composition and enzymatic digestibility of eucalyptus bark: a potentially valuable source of fermentable sugars for biofuel production – part1." Lima, M.A., Lavorente, G.B., da Silva, H.K.P., Bragatto, J., Rezende, C.A., Bernardinelli, O.D., de Azevedo, E.R., Gomez, L.D., McQueen-Mason, S.J., Labate, C.A. & Polikarpov, I. (2013) Biotechnology for Biofuels 6:75

SUNLIBB/CeProBIO Publications

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"Investigating laccase and titanium dioxide for lignin degradation." Kamwilaisak, K. & Wright, P.C. (2012) Energy & fuels. 26 (4): 2400-2406

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

"Composition and structure of sugarcane cell wall polysaccharides; implications for second-generation bioethanol production." DeSouza, A.P., Leite, D.C.C., Pattathil,S., Hahan, M.G. & Buckeridge, M.S. (2013) Bioenergy Res. 6: 564-579

"Sugarcane as a bioenergy source: History, performance and perspectives for second-generation bioethanol." De Souza, A.P., Grandis, A., Leite, D.C.C. & Buckeridge, M.S. (2014) Bioenergy Res. 7:24-35