3rd European Biorefinery Training School

7-10 July, Budapest

6 July	
18:00	Registration and practical information (registration is also possible on 7 July)
19:00	Welcome Cocktail

7 July	
	Session 1: Biorefinery concepts *chair: Michael O'Donohue, INRA*
8:30	Opening the school - The biorefinery concept: example of advanced biorefining of lignocellulosic biomass *Michael O'Donohue, INRA*
9:30	IEA Bioenergy Task42 Biorefining – Sustainable processing of biomass for food and non-food applications *Rene van Ree, Wageningen UR*
10:00	Starch-based biorefineries *Jan Bach Kristensen, Novozymes*
10:30	**Coffee Break**
11:00	Cellulosic ethanol – a new era in biofuels *Jan Bach Kristensen, Novozymes*
11:30	Biorefinery, the bridge between agriculture and chemistry *Johan Sanders, Wageningen UR*
12:30	**Lunch**
	Session 2: Biorefineries in reality *chair: Johan Sanders, Wageningen UR*
13:30	Giving Value to the Sustainable Processing of Biomass: processes to utilize different fractions of biomass *Gerfried Jungmeier, Joanneum Research*
14:30	Proesa® Technology and the biorefinery concept: our green challenge *Dario Giordano, Beta Renewables s.p.a.*
15:30	**Coffee break**
16:00	Biorefinery concept of Borregaard: options for lignin *Martin Lersch, Borregaard AS*
17:00	Organic waste, the renewable commodity: new aspects of biogas production *Zoltán Vass, UTB Envirotec Plc.*
18:00	**Coffee Break**
	Panel discussion: Innovation, enterprise, biorefining – the European policy landscape and opportunities for creating a world leading biobased economy *moderator: Joanna Dupont-Inglis, EuropaBIO*

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18:30	Topics: • Why is it (not) happening? Understand the drivers of the bioeconomy transition. • How to make it in the EU? The base for sound decisions: metrics, data and policy. • Can it ever be economic? Products, solutions and markets. • Can we do it? A few words on barriers and ways out. Participants: • Eric Sievers, CEO, Ethanol Europe • Nour Amrani, Public Affairs Manager, Novozymes • Michael O'Donohue, Research Director, INRA • Richard M. Cruse, Professor, Iowa State University • Dario Giordano, Beta Renewables • Gerfried Jungmeier, Chief Technology Officer, Joanneum Research
19:30	Q&A with panel members
20:00	**Interactive dinner** (possibility to continue discussion with experts)

8 July	
Site visits in small groups, by coaches (lunch is provided during the trips)	
Pannonia Ethanol Zrt, Dunaföldvár *first generation ethanol plant*	http://www.pannoniaethanol.com
Organica, Budapest *novel waste water treatment technology developer*	http://www.organicawater.com
Dreher Brewery, Budapest *100 years old brewery, presenting the history of fermentation*	http://www.dreherrt.hu

The site visits will take place in two groups. You will receive information on group distributions and departure times on the 7th of July.

9 July	
9:00	**Module 1: Feedstock: sourcing, types, logistics, hurdles**
	Biomass feedstock availability in the EU and hurdles in the supply chain *Fabio Monforti-Ferrario, Joint Research Centre of the EU*
	Soil and Water Resource: Challenges and opportunities for biofuels. *Richard M. Cruse, Iowa State University*
11:00	**Coffee break**
11:30	**Module 2: Pretreatment for Lignocellulosic Biorefineries**
	Rob Bakker, Wageningen UR

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12:30	**Lunch**	
13:30	**Module 3: Enzymes: The bottleneck of enzymatic decomposition of biomass**	
	Enzymatic hydrolysis of lignocellulosic *Kristina Kruus, VTT*	
	Efficient enzymatic degradation of hemi-cellulose *Marco van den Berg, DSM*	
15:30	**Coffee break**	
16:00	**Module 4A – engineering approach**	**Module 4B – business approach**
	Design of integrated biorefineries *Antonis Kokossis, National Technical University of Athens*	The biorefinery output: a range of marketable products based on lignin and carbohydrates *Richard Gosselink, Wageningen UR*

10 July		
8:30	**Module 5A – engineering approach**	**Module 5B – business approach** The market for biobased products
	Techno-economic assessment of biorefinery processes *Zsolt Barta, Budapest University of Technology and Economics* *Stefano Macreli, Lund University*	Bio-based products markets – status and developments *Adrian Higson, NNFCC*
		Case-studies on screening and selection of bio-based products for specific platform chemicals and chemical building blocks *John A. Posada, Utrecht University*
10:30	**Coffee break**	
11:00	**Module 6A – engineering approach** Sustainability assessment and LCA of biomass supply chains	**Module 6B – business approach** Biorefinery integration into existing industries – supply chain aspects
	Sustainability principles for bioenergy development with the involvement of local communities *Csaba Vaszkó, WWF Hungary*	Integrating biorefinery activities with existing industries - case studies from Scotland *Martin Tangney, Edinburgh Napier University*
	Regional optimization of feedstock supply chains and logistics *Benoit Gabrielle, INRA*	Practical guide to designing biorefineries *Zsolt Bodnár, ChemCon Holding Ltd.*
13:00	**Lunch**	
14:00	**Module 7: Climate-KIC in the biobased area**	
	Biorefining in view of climate change: Introducing the Climate-KIC and its Bioeconomy Platform *Zsolt Gémesi, Climate-KIC / Imperial College London*	

	Bioeconomy in Central and South-East Europe: the potential of sustainable biomass value chains *Peter Canciani, Central European Initiative*
	Supply chain models in the Climate-KIC regions: BEACON Wales - Translating research and facilitating company interaction to support the bioeconomy *Joe Gallagher, BEACON Wales* Biorefining in Emilia Romagna: players, policy tools and indexes in value chain mapping *Diego Marazza, University of Bologna*
18:00	**Closure and gala dinner**