

International CeBiTec Research Conference

September 21st – 24th



Advances in industrial biotechnology: Prospects and challenges for the development of algal biotechnology

Venue: Center for Interdisciplinary Research (ZiF), Bielefeld University, Methoden 1, 33615 Bielefeld

Sunday, 21.09.2014

All events on Sunday will take place at the Park Inn Hotel, Am Johannisberg 5, 33615 Bielefeld

17.00 - open

Registration

Welcome & Opening

18.30 - 19.00

Thomas Noll, Scientific Director Center for Biotechnology

Olaf Kruse, Conference organization

19.00 - open

Get together

Monday, 22.09.2014

All further events will take place at the conference venue (ZiF)

9.00 - 9.15

Alison Smith & Rene Wijffels – Introduction

Session 1

Opening lecture

9.15 - 9.50

Christoph Benning - Learning from algae how to enhance the energy density of biofuel crops

Session 2

Systems Design

9.50 - 10.25

Maria Barbosa - Outlook on microalgae production chains

Coffee Break, 10.25-10.55

Session 3

Algal Biology

10.55 - 11.30

Chris Bowler - Genomics-enabled exploration of the secrets of marine diatoms

11.30 - 11.55

Claire Remacle - Characterization of a null mutant of isocitrate lyase in *Chlamydomonas* grown under mixotrophic conditions

11.55 - 12.20

Roberto Bassi - The quest for high biomass yield of microalgae grown in photobioreactors

12.20 - 12.45

Lutz Wobbe - Cellulose degradation and assimilation by the unicellular phototrophic eukaryote *Chlamydomonas reinhardtii*

Lunch, 12.45-13.45

Session 4

Metabolic engineering & synthetic biology of cyanobacteria

13.45 - 14.20

Paul Roessler - Photosynthetic production of biofuels from CO₂ by cyanobacteria using Algenol's Direct to Ethanol® process

14.20 - 14.45

Peter Lindblad - Metabolic and genetic engineering of cyanobacteria for enhanced hydrogen production

14.45 - 15.10

Ana Gonçalves - Mixed cultures of *Synechocystis salina* with selected species enhance cellular growth and metabolic activity

Coffee Break & Poster Session, 15.10-17.00

Session 5

17.00 - 17.30

Elevator pitch talks

Session 6

Education

17.30 - 17.55

Rene Wijffels - Tba

Tuesday, 23.09.2014

9.00 - 9.15

Alison Smith & Rene Wijffels - Introduction

Session 7

Metabolic engineering & synthetic biology of eukaryotic microalgae

9.15 - 9.40

Tba

9.40 - 10.15

Jonathan Napier - Metabolic engineering of microalgae for the enhanced production of high value lipids

Coffee Break, 10.15-10.45

10.45 - 11.20

Gilles Peltier - Reprogramming photosynthesis for optimized reserve accumulation and hydrogen photo-production in *Chlamydomonas reinhardtii*

11.20 - 11.55

Matthew Posewitz - Photons to fuels: metabolic networks to carbohydrates, lipids and hydrogen

11.55 - 12.20

Tomas Morosinotto - Biotechnological optimization of light use efficiency in *Nannochloropsis* cultures for biodiesel production

Lunch, 12.20-13.15

Session 8
Genetic tools

13.15 - 13.50

Saul Purton - Algal chloroplast engineering: new tools and technologies and applications

13.50 - 14.15

Mark Scaife - New tools for transgene expression in *Chlamydomonas reinhardtii*

14.15 - 14.40

Michiel Matthijs - The Algenuity platform for microalgal strain engineering and culturing

14.40 - 15.05

Kyle Lauersen - A synthetic optimized vector system for *Chlamydomonas reinhardtii*

Coffee Break & Poster Session, 15.05-16.15

Session 9

16.15 - 16.45

Elevator pitch talks

Excursion & Conference Dinner, 17.00-open

Wednesday, 24.09.2014

9.00 - 9.15

Alison Smith & Rene Wijffels - Introduction

Session 10

Implementation in the landscape

9.15 - 9.50

Michael Bippes - Algae Products: Automotive industry needs and expectations

Session 11

Maximization of productivity under outdoor conditions

9.50 - 10.25

Liliana Rodolfi - Optimisation of biomass and lipid productivity in outdoor Green Wall Panel photobioreactors with four different algal genera

Coffee Break, 10.25-10.55

10.55 - 11.20

Fabrice Franck - Photosynthetic adaptations during cultivation of *Scenedesmus* sp. in open thin-layer cascade systems in Liège, Belgium

11.20 - 11.45

Lenny de Jaeger - Superior triacylglycerol (TAG) accumulation in starchless mutants of *Scenedesmus obliquus*

11.45 - 12.10

María Vázquez - Production of stable microalgae-enriched foam

12.10 - 12.30

Panel discussion

Concluding remarks - Olaf Kruse

Conference closes, 12.30