

Scientific Program

Sunday, August 14th – Room Aspen

- 18:00 - 18:30 **Opening Plenary.**
Chair:
José Goldemberg, University of São Paulo, Brazil
A Historical Account of Bioenergy Production in Brazil
- 19:00 **Welcome Cocktail**

Monday – August, 15th, 2011 – Room Aspen

Plenary 1. Chair:

- 9:00 - 9:30 **Marcos Jank**, UNICA, Brazil
Brazilian Ethanol Industry – A New Growth Cycle

Plenary 2. Chair:

- 9:30 - 10:00 **Chris Somerville**, University of California, Berkeley, EBI, USA
Second Generation Biofuels

- 10:00 - 10:30 **BP Biofuels Coffee break**

Plenary 3. Chair:

- 10:30 - 11:00 **Lee Lynd**, Dartmouth College, USA
Gracefully Reconciling Very Large Scale Bioenergy Production with Other
Priorities: From Vision to Analysis to Action

Plenary 4. Chair:

- 11:00 - 11:30 **Guilherme de Almeida Freire**, Embraer
Aviation Biofuels in Brazil - Challenges and Perspective

- 12:00 - 14:00 **Lunch (on your own)**

Round Table 1 - Policy Section: How Much Biofuel Can We Produce in the World?

Chair: Martin Keller

14:00 - 16:00

Carlos Henrique de Brito Cruz, FAPESP, Brazil

Richard Flavell, CERES, USA

Production of usable biomass for bioenergy/biofuels

Jeremy Woods, Imperial College, UK

Luiz Carlos Corrêa Carvalho, ABAG, Brazil

- 16:00 - 16:30 **BP Biofuels Coffee break**

Round Table 2 - Policy Section: Policies for a Bio-based Economy

Chair: Carlos Pacheco, UNICAMP

16:30 - 18:30

Luuk Van Der Wielen, BE-BASIC, The Netherlands

Luiz Augusto Horta, UNIFEI, Brazil

Aloizio Mercadante, MCT, Brazil (to be confirmed)

Sharlene Weatherwax, DOE, USA

The United States Department of Energy's Role in Research and Innovation for
a Future Bio-economy

- 18:30 - 20:30 **Poster Session**

- 20:30 **Brasken Speakers Dinner (invitation only)**

Tuesday - August 16th, 2011 - Room Aspen

Plenary 5 - Biomass Processing Technologies

Chair:

Bruce Dale, Michigan State University, USA

9:00 - 10:00 Fundamental insights to the AFEX process that catalyzes the rapid deconstruction of lignocellulose to fuels and chemicals

10:00 - 10:30 **BP Biofuels Coffee break**

Plenary 6

Chair:

Rubens Maciel, FEQ, UNICAMP, Brazil

10:30 - 11:30 An Integrated And Flexible Process Concept For The Sugar And Ethanol Production With Electricity Co-Generation

12:00 - 14:00 **Lunch (on your own)**

14:00 - 15:30

Room Aspen

Round Table 3 - Engines and Biofuels: Moving the World

Chair: Waldyr L. R. Gallo, Unicamp

Francisco Nigro, IPT, Brazil

Vehicular Engines for Renewable Fuels

Nadia Armelin, Oxiten, Brazil

Additive Composition For Ethanol Fuels

Eduardo Tomanik, MAHLE, Metal Leve S.A., Brazil

Ethanol as future fuel for optimized combustion engines

Fernando de Souza Costa, INPE, Brazil

Experimental Investigation of a Dual Pressure Swirl Injector for Liquid Biofuels

14:00 - 15:30

Room Vail

Parallel Session 1 - Biomass

Chair: Marcos Buckeridge

Nicholas Carpita, Purdue University, USA

Tailoring Biomass for Catalytic Conversion to Biofuels and Bio-based Products

Marcos Buckeridge, IB-USP, CTBE, Brazil

Understanding carbon metabolism in sugarcane to improve bioethanol production

Katja Machemer, Ohio State University

Control of lignin and general phenylpropanoid biosynthesis in maize

Viatcheslav Kafarov, - Universidad Industrial de Santander

Metabolic engineering of tobacco biomass for biofuel

14:00 - 15:30

Room Bariloche

Parallel Session 2 - Alcoholchemistry, Sugarchemistry, Biorefineries

Chair:

Wolfgang Marquardt, Aachen Institute, Germany

Evaluation of Reaction Pathways for Next-Generation Biofuels

George Huber, University of Massachusetts, USA

Renewable Petrochemicals from Biomass by Catalytic Fast Pyrolysis

Antonio Bonomi, CTBE, Brazil

The Virtual Sugarcane Biorefinery (VSB) - second generation ethanol production from sugarcane in Brazil

Lee Lynd, Dartmouth College, USA

Second Generation Cane Ethanol: Potential and Realization

14:00 - 15:30

Room Chilan

Parallel Session 3 - International Energy Agency - IEA

Chair:

Jack Saddler, UBC Faculty of Forestry, Canada

The Biorefining Story, Progress in the commercialization of biomass-to-ethanol and the work of IEA Bioenergy Task 39

Gisle Johansen, Borregaard, Norway

A Biorefinery approach to production of lignocellulosic ethanol and lignin chemicals from sugarcane bagasse

Les Edye, SRI, Australia

Michael Persson, Dong Energy, Denmark

15:30 - 16:00 BP Biofuels Coffee break

16:00 – 17:30

Room Aspen

Parallel Session 4 - Systems and Synthetic Biology BE-BASIC/BIOEN

Advances of Synthetic Biology in Industry

Chair: Dr. Ton van Maris

Boris J.C. Stambuk, UFSC, Brazil

Genomic and evolutionary engineering strategies in Yeasts for improved Bioethanol production from Sugarcane

Ton van Maris (TU Delft)

Engineering of carboxylation in *Saccharomyces cerevisiae*: PEPCK and malic enzyme

Liang Wu (DSM): title to be announced

Travis Bayer, Imperial College

Rewiring biological networks to enhance fuel production

16:00 – 17:30

Room Vail

Parallel Session 5 - Biofuel Technologies

Chair

Robbie Venderbosch, BTG Biomass, The Netherlands

Unlocking the Potentials of Biomass Derived Pyrolysis Oils in Existing Refineries

Mercedes Ballesteros, CIEMAT, Spain

Ethanol Production from Lignocellulosic Biomass

Elba Bon, UFRJ, Brazil

Enzymes - a Core Issue for Biomass Biotechnological Utilization

Alipio Ferreira Pinto Junior, Petrobras, Brazil

16:00 – 17:30

Room Bariloche

Parallel Session 6 – Sustainability

Chair:

Marcia Azanha, ESALQ, University of São Paulo, Brazil

Sugarcane and Farming Activities: Indicators of Mortality and Retirement

Paulo Furquim de Azevedo

Has information been an obstacle for the development of the biofuel international market?

Angel Dario, Colombian Biofuels Federation

Colombian Biofuels Perspectives

16:00 – 17:30

Room Chilan

Parallel Session 7 – International Energy Agency - IEA

Chair:

Willem Heber van Zyl, University of Stellenbosch, South Africa

Sustainable Biofuel Production In Southern Africa : Opportunities And Challenges

Karin Oyaas, Paper and Fibre Research Institute (PFI), Norway

Bioalcohol production from lignocellulose – a comparison of processing schemes for different lignocellulosic raw materials

Woergetter Manfred, BLT Wieselburg, Federal Institute for Agricultural Engineering, Austria

Bioenergy and Biofuels in Austria

Donald V. O'Connor, (S&T)2 Consultants Inc., Canada

Biofuel LCAS And Temporal Issues

17:00 - 19:00

Poster Session

Tuesday - August 17th, 2011 - Room Aspen

- 9:00 - 10:00 **Jamie H.D. Cate**, University of California, Berkeley, EBI, USA A
Tale of Two Fungi: Improving Biofuel Production from Plant Biomass
BP Biofuels Coffee break
- 10:00 – 10:30
Plenary 8
Chair:
- 10:30 – 11:30 **Jeremy Woods**, Imperial College, UK
Land use change
- 12:00 - 14:00
Plenary 9
Chair:
- 14:00 - 14:45 **Steve Long**, University of Illinois, EBI, USA
Biomass and Climate Change
- Plenary 10**
Chair:
- 14:45 - 15:30 **Carlos Joly**, UNICAMP, Brazil
Creating new knowledge in biodiversity and translating it into public policies in São Paulo, Brazil
- 15:30 – 16:00 BP Biofuels Coffee break
- 16:00 – 17:30 **Room Aspen**
- Parallel Session 8 – Photosynthesis**
Chair: Rene Nome
- Daniel Bush**, Colorado State University, USA
- Rene Nome**, IQM-Unicamp
- Marcelo Menossi**, UNICAMP
Gene regulation and biotechnology of drought tolerance in sugarcane
- André Ferraz**, Escola de Engenharia de Lorena, USP
The origin of recalcitrance in sugar cane hybrids with contrasting lignin contents and chemically pretreated materials
- 16:00 – 17:30 **Room Vail**
- Parallel Session 9 - Feedstock OMICs**
Chair: Glaucia Souza
- Glaucia Souza**, IQ-USP
Regulation of Sucrose Content and Yield in Sugarcane
- Mike Bevan**, John Innes Centre, UK
- Martin Keller**, BESC ORNL, USA (to be confirmed)
- Eric Jan Mathur, SG Biofuels USA**
Breeding & biotechnology towards optimized Jatropha planting materials for biodiesel production
- 16:00 – 17:30 **Room Bariloche**
- Parallel Session 10 - Alcoholchemistry, sugarchemistry, Biorefinaries**
Chair
- Andreas K. Gombert**, POLI-USP
Quantitative physiology and stress tolerance of yeast strains from the industrial production of fuel ethanol in Brazil
- Jaime Rodriguez**, Forest Science Faculty, Universidad de Concepcion, Chile
Brown-rot fungi biomimetic pretreatment to bioethanol production from wood
- Henning Jorgensen**
Impact Of Water Activity On The Effectiveness Of High Solids Enzymatic Hydrolysis Of Lignocellulose

16:00 – 17:30

Room Chilan

Parallel Session 11 - Sustainability

Chair

Andre Nassar, ICONE, Brazil

Gabriel M. Pedroso,

The Sustainability of Biomass Production in Mediterranean Climates - Nitrogen and Water Use in Low and High Input Irrigated Switchgrass (*Panicum virgatum*) Systems in California

Maria da Graça Derengowski, Instituto de Economia da UFRJ

Recent Evolution of Sugarcane Industry: 10 years of competition and growth

17:30 - 19:30

Poster Session

BIOEN Wine & Cheese (by invitation)

Thursday – August 18th, 2011

09:00 – 10:00

Room Aspen

Parallel Session 12 - Process Integration

Chair:

François Marechal, Ecole Polytechnique Federale de Lausanne, Switzerland

Silvia Azucena Nebra, UFABC

Energy consumption in ethanol production by enzymatic hydrolysis – The integration with the conventional process using Pinch Analysis

Caliane Bastos Borba Costa, UFSCAR

Study of second generation sugarcane bioethanol viability through integrated process optimization

09:00 - 10:30

Room Vail

Parallel Session 13 - Industrial Biotechnology/Enzymes

Chair:

Igor Polikarpov, IF, University of São Paulo, Brazil

Hydrolytic Enzymes, their Structure-Functional Studies and Biomass Transformation into Second Generation Biofuels

Jim McMillan, NREL, USA

Harnessing Industrial Biotechnology for Production of Liquid Biofuels from Cellulosic Feedstocks

Gustavo Goldman, FCF, University of São Paulo, Brazil

Functional analysis of the transcription factors XlnR and CreA involved in the regulation of transcription of cellulases- and hemicellulases-encoding genes in *Aspergilli*

Fabio Squina

The Lignocellulolytic Metagenome of Sugarcane Bagasse-Degrading-Soil

09:00 - 10:30

Room Bariloche

Parallel Session 14 - Agriculture

Chair:

Carlos Eduardo P. Cerri, ESALQ

Keith Kline, ORNL

Indicators to support environmental sustainability of agricultural production and bioenergy crops

Helio Antonio Wood Joris, IAC

Stalk yield and nitrogen exports after nitrogen fertilization of two ratoons of sugarcane

Edgar Ferreira Gomes de Beauclair, ESALQ

Efficiency of a Humic Acid Based Soil Conditioner in Sugar Cane Crop

09:00 - 10:30

Round Table 4 BRASKEM Bio-based Chemicals

Chair: José Vitor Bomtempo, UFRJ, Brazil

Room Chilan

Nathan J. Hillson, JBEI, USA

j5: DNA assembly design automation for metabolic pathways

Eduardo Falabella, Petrobrás, Brazil

Joseph John Bozell, University of Tennessee, USA

09:00 - 10:30

Parallel Session 15 BE-BASIC Sustainability

Chair: Patricia Osseweijer

Room Vermont

Arnaldo Walter, CTBE/UNICAMP

Integrated assessment of sustainability

Ramon Hanssen, Delft University of Technology

Novel satellite measurement techniques for land-use

Paul Bodelier, Netherlands Institute of Ecology

Novel soil quality monitoring tools

Tadeu Malheiros, EESC - USP

Engagement for integrated sustainable assessment

10:30 – 11:00

BP Biofuels Coffee break

11:00 - 12:00

BBEST Awards - Sponsored by Monsanto
Closing Ceremony