#### School on Utilization of Biomass for the Production of Chemicals or Fuels "The concept of Biorefinery comes into operation"

Open to PhD students, Post Docs, Industry staff

Date: September 18-24, 2011

Location: Hotel Orsa Maggiore, Castro Marina-LE, IT (www.orsamaggiore.it)

#### **Organizing Committee**

Prof. Angela Dibenedetto CIRCC-UNIBA, IT, Co-Chair Prof. Angeliki Lemonidou, CERTH, GR, Co-Chair Dr. Carlo PASTORE, CIRCC-UNIBA, IT Dr. Eleni Heracleous, CERTH, GR Dr. Simona Bennici, UCCS-CNRS, FR Mrs. Eibhilin Manning, EUBIA Mrs. Emilie Mercier ALMA, FR

#### Scientific Committee

Prof. Franck Dumeignil, UCCS-CNRS, FR, Co-Chair Prof. Michele Aresta, CIRCC, IT, Co-Chair Dr Jean Luc Dubois, Arkema Dr Ivan Andersen, HTAS Dr. Klaus Neumann, Borregaard Dr. Karsten Hjort, Novozymes Dr. Ausilio Bauen, Imperial College

## Registration

The registration fee for students *will include*: breakfast, half or full board (to be decided by the participant at the moment of the registration) with accommodation in a double-bed room (6 nights), teaching material & information package, CD with the lectures, visit to Lecce and Otranto, Social dinner, transportation from/and to the airport in Brindisi or the train station in Lecce.

See the Registration Forms

# **Programme of the School**

#### Arrival and Departure:

Arrival: September 18, 2011 until early afternoon Departure: September 24, 2011 after lunch

**Students** are due to stay for the entire duration of the School **Organizers** are expected to stay for the whole duration of the School. **Teachers** are expected to be present three days at the School: one day before and one day after the lecture

#### **Registration, Welcome and Opening Lecture**

September 18, 2011 Registration 3.00 pm -6.30 pm Welcome by the organizers: 6.30-7.15 pm Prof. Michele Aresta, Co-ordinator of the Training and Dissemination SP, Eurobioref; Prof. Angeliki Lemonidou, WP Leader and Co-Chair of the Organizing Committee Prof. Angela Dibenedetto, Co-Chair of the Organizing Committee Opening Lecture 7.15 pm-8.00 pm Franck Dumeignil, Project Co-Ordinator: "The Eurobioref project" Welcome cocktail: 8.00 pm–8.30 pm il Dinner: 8.30 pm

# Working Programme

## Day 1, Monday

09.00-10.15	Refinery of the future: feedstock, processes, products Jean-Luc Dubois, ARKEMA
10.15-11.30	The terrestrial Biomass: formation and properties (crops and residual biomass) <b>Myrsini Christou, CRES</b>
11.30-12.00	Break
12.00-13.15	Aquatic biomass: production technologies, isolation and treatment <b>Angela Dibenedetto, CIRCC</b>
13.30	Lunch and break
18.00-20.00	Oral flash presentation of posters (5 min, 3-4 slides max.)
20.30	Dinner
21.30-22.30	Poster session and Informal meeting (wine will be served)

## Day 2, Tuesday

- **09.00-10.15** Biomass pre-treatment: separation of cellulose, hemicellulose and lignine. Existing technologies and perspectives. Anna Raspolli, CIRCC
- **10.15-11.30** Conversion of cellulose and hemicellulose into platform molecules: chemical routes **David Serrano, IMDEA-ES**
- 11.30-12.00 Break
- **12.00-13.15** Conversion of cellulose and hemicellulose into platform molecules: biotechnological approach Klaus Neumann, Borregard
- 13.30 Lunch and break
- **18.00-20.00** Oral flash presentation of posters (5 min each, max 3-4 slides)
- 20.30 Dinner
- 21.30-22.30 Poster session and Informal meeting and questions to teachers (wine will be served)

## Day 3, Wednesday

- **09.00-10.15** Conversion of lignine: chemical technologies and biotechnologies Claudia Crestini, CIRCC
- **10.15-11.30** Fermentation of C6- and C5-sugars: mature and new biotechnologies *Philippe Soucaille, METEX*
- 11.30-12.00 Break
- **12.00-13.15** Anaerobic fermentation: biogas from waste. The basic science towards technological applications **Michele Aresta, CIRCC**
- 13.30 Lunch and break
- **16.00**Departure for the visit to Lecce and Otranto.Dinner will be served nearby Otranto.

## Day 4, Thursday

- 09.00-10.15 Catalytic conversion of biosourced raw materials: Homogeneous catalysis. François Jerome, UNIPoitiers, FR
- **10.15-11.30** Catalytic conversion of bio-sourced raw materials: Heterogeneous catalysis **Wolfgang Hoelderich, Aachen**
- 11.30-12.00 Break
- **12.00-13.15** Catalytic conversion of oils extracted from seeds and algae: from polyunsaturated long chains to functional molecules *Matthieu Chatillon, Novance*
- **13.30** Lunch and break
- **18.00-20.00** Case study: Biogas and biohydrogen from residual biomass and process water **Roberto Farina-ENEA**
- 20.30 Dinner
- **21.30-22.30** Meet the teacher: informal discussion (wine will be available)

# Day 5, Friday

- **09.00-10.15** Conversion of biomass to fuels and chemicals via thermochemical processes Angelos Lappas, CERTH
- **10.15-11.30** Biomass gasification: production of Syngas or Heat & Electricity *Kiriakos Panopoulos, CERTH*
- 11.30-12.00 Break
- **12.00-13.15** From Syngas to fuels and chemicals: Chemical and Biotechnological routes Carlo Perego, Marco Ricci, ENI
- **13.30** Lunch and free time
- **18.00-20.0** Biopolymers from Biomass Catia Bastioli, Novamont
- **20.30** Social Dinner and Show

# Day 6, Saturday

- **09.15-11.00** LCA applied to the energetic, economic and environmental evaluation of the production of fuels from biomass: A case Study **Ausilio Bauen, Imperial College**
- **11.00-12.15** Policy aspects of biomass product chains TBD
- 12.15-12.30 Closing remarks and future activities: A. Lemonidou and M. Aresta
- 13.00 Lunch-Buffet
- **14.30.** Departure by bus to Brindisi Airport or Lecce Train Station

# Presentation of Posters is strongly encouraged Two prizes for the best poster will be presented, one is reserved to PhDs one to Post Docs.