



## **MINUTES**

**Meeting of the ESBES General Assembly  
Faro, September 8, 2008, 12:00-13:00 hrs**

## 1. Welcome and Opening

Opening of the meeting at 12:00 and welcome of the participants by the chairman, Marin Berovic.

## 2. ESBES administrative matters

### 2.1. Handover of Chairmanship

Due to the end of the period, the ESBES Chairmanship was handed over from Marin Berovic to Alois Jungbauer. Herewith Marin Berovic resigned from the Board.

### 2.2. Report from the Board

The ESBES Board now consists of the following ex-officio members:

- Alois Jungbauer, Chairman
- Willi Meier, Secretary
- Andreas Lübbert, Chairman Working Group Bioreactor Performance
- John Woodley, Chairman Working Group Biotransformations
- Clemens Posten, Chairman Working Group M3C
- Owen Thomas, Chairman Working Group Downstream Processing
- Andreas Schmid, Vice-Chairman Working Group Biotransformations
- Carl-Frederik Mandenius, Vice-Chairman of the Working Group M3C
- Guilherme Ferreira, Vice-Chairman Working Group Downstream Processing

Furthermore the ESBES Board has the following elected members:

- Manuel Canovas, University of Murcia, Spain
- Torsten Schulz, Boehringer Ingelheim, Germany
- Klaus Graumann, Sandoz GmbH, Kundl, Austria
- Arne Staby, Novo Nordisk AB, Copenhagen, Denmark

### 2.3. ESBES finances

Overview of the ESBES finances (status 31 December 2007):

Section Funds	17,094.00 €
Working Group Bioreactor Performance	10,580.69 €
Working Group Downstream Processing	63.71 €
Working Group M3C	1,322.38 €

Animal & Plant Cell	205.79 €
<b>Total</b>	<b>29,266.67 €</b>

2000 EUR arising from a joint Workshop of the WG Downstream Processing and the Dutch Biotechnological Society are not yet included and will be transferred to the account of the WG on Downstream Processing.

### 3. Working Group activities

The following activities were presented:

- **WG Downstream Processing: Owen Thomas**

A workshop on High Throughput Systems was postponed and is now planned for Spring 2009. A 7 day summer school is planned for 2009 in Tavita, Portugal. A joint Workshop was organised with the Dutch Biotechnological Society and 2000 EUR will be transferred to the WG account. See Report in *annex 2*

- **WG M3C: Clemens Posten**

The WG will organise a 2-day session within the ACHEMA (11-15 May 2009) conference programme, one day on bioenergetic systems, one day on using biosystems in bioprocess engineering. See Report in *annex 1*

Clemens Posten invited the ESBES Members interested in the WG activities to attend the WG meeting on 9 September 2008.

- **WG Biotransformations: John Woodley**

A joint workshop per year with ESAB (EFB Section on Applied Biocatalysis) is planned.

- **WG Bioreactor Performance: Marin Berovic**

The Bioprocess Engineering Course will take place 14-19 September 2008 in Supetar, Island of Brac. This is a master course for doctoral and postdoctoral young scientists, jointly organised by the EFB Sections ESBES, ESAB and Microbial Physiology.

- **WG Animal Plant Cell:** No future activity is planned. The WG will be closed and the 205.79 EUR allocated to the WG will be transferred to the Section Fund.

- Proposed new **WG Bioenergy Systems: Luuk van der Wielen**

The idea is to organise a leading EU engineering science platform focussing on bioenergy; presently no such platform exists. European organisations active in this

field, like the European Commission, EuropaBio, EFChE is envisaged.  
Presentation of proposals in *annex 3*.

#### **4. Congresses**

##### **4.1. 7th European Symposium on Biochemical Engineering Science (ESBES-7), 7–10 September 2008, Faro**

Guilherme Ferreira presented an overview of ESBES-7. 243 papers have been submitted, 275 participants from 28 countries have registered. Main groups are from Portugal (61) and Germany (74).

A competition for the Poster Awards and the Malcolm Lilly Award will take place. Proceedings of ESBES-7 will be published in a special issue of the *Biotechnology Journal* in summer 2009. All speakers and poster authors of ESBES-7 were invited by Alois Jungbauer to submit papers. According to a cooperation agreement, Wiley offers a 30% discount for print and online personal subscription of the *Biotechnology Journal* to ESBES members. ESBES Highlights may be published in the journal.

##### **4.2. 8th European Symposium on Biochemical Engineering Science (ESBES-8)**

Date and Place of ESBES-8 are not yet finally decided.

##### **4.3. Bioprocess Engineering Course, 14–19 September 2008, Supetar, Island of Brac**

Marin Berovic reported that 70 participants will attend the course.

##### **4.4. 14th European Congress on Biotechnology (ECB-14), 13–16 September 2009**

ECB-14 will take place in Barcelona. On this occasion the next ESBES General Assembly will be held.

#### **5. Date and Place of next Generally Assembly**

The next meeting of the Generally Assembly will take place during the 14th European Congress on Biotechnology (ECB-14), 13–16 September 2009, Barcelona.

**6. Any other business**

There was no other business.

**7. Closing of the meeting**

The General Assembly was closed at 13:00 hrs.

# M3C Report ESBES 2008



“Promote M3C as a hub for exchange of ideas and information and as a platform for meeting people !”

**M3C**  
Measurement  
Monitoring  
Modeling &  
Control

# Some Activities

Contribution to political PAT activities [Carl-Fredrik Mandenius]

Contributions to course on PAT at Dechema  
and course on Brac Island

Contributions to      ESBES 2008 in Faro, Portugal  
                                 Workshop: Quality by design  
                                 BioInfo07, BioInfo08 in Sofia, Bulgaria

Different activities from M3C members

# Symposium M3C in Emerging Fields along Achema 2009

2 Days in May 2009 - 24 Papers organized in 4 Sessions



Bio-energy systems – challenge for optimization

From system biology to bioprocesses

Thanks to Dechema for hosting and assistance !

# Coming up

Web-Site [www.m3c.esbes.org](http://www.m3c.esbes.org)

Contribution to CAB11, 2010, Belgium

Membership initiative, attract young people

Meeting after M3C session near lunch area

new members, new activities

preparation Achema symposium

*This is not only an announcement, this is an invitation !*

# M3C Meeting

Web-Site [www.m3c.esbes.org](http://www.m3c.esbes.org)

Marketing of events – network of courses

Appr. 250 visitors per months

Missing: member and activity list

# M3C Meeting

Preparation Achema symposium

Bio-Energy systems – challenge for optimization

Joint with new WG Bio-Energy Systems (Luuk van der Wielen)

Micro-algae for energetic use (Clemens Posten)

Oils from yeasts

New developments in classical anaerobic fermentations (???)

# M3C Meeting

Preparation Achema symposium

From System Biology to Bioprocesses

Recent activities e.g. BMBF in that direction

# M3C Meeting

Membership initiative, attract young people

Identified Fields for more Activities:

Process Analytical Technology (PAT)	[Carl-Fredrik Mandenius]
Molecular methods for process development	[Karl Bayer]
Simulation for training and education	[Volker Hass]
Application to downstream processing	[Gerhard Schembecker]

Cleaning of Member-List

Active Acquisition during meetings, courses, ...

# M3C Meeting

Membership initiative, attract young people

What could be a mission for the working group ?

What could be real activities with common interest ?



***The Working Group Downstream Processing (WGDSP) intends to stimulate advances in the recovery and purification of biological products. In order to achieve this goal, it provides a platform for communication, education and exchanging ideas between researchers in the field. WGDSP organizes recurrent two-day meetings or workshops with presentations followed by a short business meeting. WGDSP also assists in the organization of International Conferences hosted in Europe.***

Owen RT Thomas  
(WGDSP Chairman)

Guilherme NM Ferreira  
(WGDSP Vice chairman)



# WGDSP events planned for 2008

- ***Two Workshop/Meetings (spring & autumn – tba)***

***Postponed: 'Karlsruhe – 2-day International Workshop on 'HTS'  
Local organizers: M. Franzreb, FZK GmbH & J. Hubbuch, UniKa***

***SPRING 08 → SUMMER 08 → SPRING 09***

- ***WGDSP 7-day Summer School on 'Bioseparations',  
Tavira, Portugal (date tba) Focus: scientific and engineering  
concepts underpinning large-scale separation and purification of  
biological products)***

***Postponed: ESBES-7 location shifted from Ljubljana → Faro***

# WGDSP events planned for 2008

- **Two Workshop/Meetings (spring & autumn – tba)**

*Postponed: 'Karlsruhe – 2-day International Workshop on 'HTS'  
Local organizers: M. Franzreb, FZK GmbH & J. Hubbuch, UniKa*

*SPRING 08 → SUMMER 08 → SPRING 09*

- **WGDSP 7-day Summer School on 'Bioseparations',  
Tavira, Portugal (date tba)** Focus: scientific and engineering  
concepts underpinning large-scale separation and purification of  
biological products)

*Postponed: ESBES-7 location shifted from Ljubljana → Faro*

**WGDSP involved in organization of:**

- **ESBES-7, Faro, 7-10<sup>th</sup> September 2008**

- **SPICA 08, Zürich, 1<sup>st</sup> October 2008**

*(Biocontributions doubled cf. previous years)*

- **BioProduction 2008 Event, Düsseldorf, 27-30<sup>th</sup> Oct 2008**

*(Media Partnership deal with Informa Life Sciences)*

# WGDSP events planned for 2009

WG-DSP



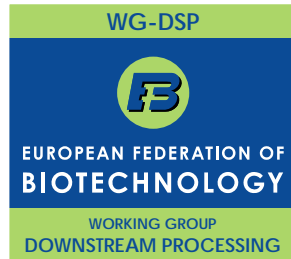
EUROPEAN FEDERATION OF  
BIOTECHNOLOGY

WORKING GROUP  
DOWNSTREAM PROCESSING

**SPRING 09** *'2-day International Workshop on 'HTS',  
Karlsruhe (Local organizers: M. Franzreb, FZK GmbH & J.  
Hubbuch, UniKa) – under a profit sharing scheme*

- *WGDSP 7-day Summer School on 'Bioseparations',  
Tavira, Portugal (date tba) Focus: scientific and engineering  
concepts underpinning large-scale separation and purification  
of biological products)*

# WGDSP finances/profit sharing



*International workshop on Downstream Processing  
(joint event with the Dutch Biotechnological Society, NBV)  
10<sup>th</sup> & 11<sup>th</sup> May 2007, Delft University of Technology, The  
Netherlands*

## *Downstream Processing: What will be the next breakthrough?*

- *Profits 4000 € shared equally between local organizers and WGDSP*
- *WGDSP current budget is (or soon will be) 2063.71 € not the 63.71 € listed*

## Proposal to ESBES for WG Bioenergy Systems

Luuk van der Wielen plus Delft/industry colleagues

TU Delft / NL Stuurgroep BBE / B-Basic



## BBE takes off in EU25 in differentiated manner

Figure 2: Energy production in EU25, 2009  
From bioenergy (not including oil-seed production)  
MWh/year/area km²



Employment > Economy growth >  
Energy use > Emissions

NL role and ambitions

- 25-30% of EU crude oil
- 22% of EU25 chemical (60 G€ sales)
- 30% biobased by 2030

• far beyond (only) domestic energy

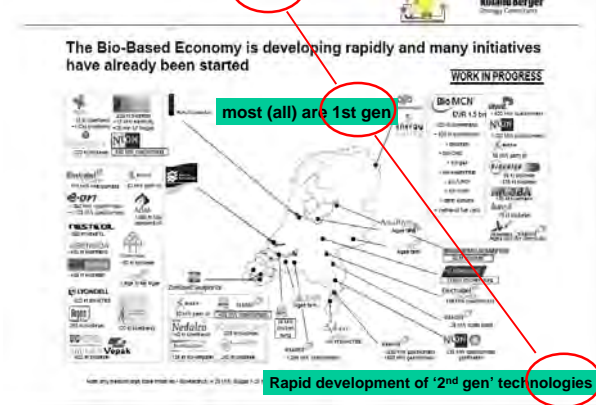
• requires major tech development

bio + chemo + thermo+ materials

• key role for science & technology

• no clear leading EU-platform for engineering community yet

NL: Private investments > 5-10 billion €



## Extramural R&D starting jan 2009

### Shell – TU Delft Collaboration

New Shell "centenary" Chair on 'Integrated Bio-energy Systems', supported by Min. of Education, for a period of 4 yr.

#### Focus on:

Novel conversion concepts of sustainable biomass sources into bio-energy products: Fuels, chemicals, heat and power

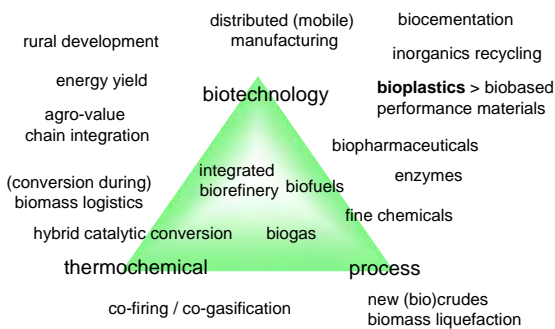
#### Integrating:

Bioconversion, chemical catalysis, separation processes and energy systems

Complemented by 3TU-Chair on 'Bio-energy Production Systems', focussing on the societal, logistic and economic spectrum.



## BBE-growth rooted in technology development



at interface with biochem engineering science

## New WG Bioprocess Integration is to ..

- organise (from ESBES) a leading EU engineering science platform to support european science & technology development

#### Focus

- communicate / propagate **integrated** science and technology development
- organise/stimulate relevant activities (sessions at ESBES and other conferences, workshops, course\*, internet, e-learning)
- impact the future EC/FP agenda
- connect to societal / perception / macro-economic discussion
- interfaced with other (potential) players (EuropaBio, EFChE, ..)
- aligned with ESBES & Biorefinery (RRB) conferences
- support from EC-US taskforce on Biotech Research (DG XII, DoE/USDA) and several of the national research bodies

## Who in WG Bioprocess Integration ..

- activities open to all ESBES member (individuals / organisations)

### tentative Core team (to be confirmed)

- *To be confirmed*, France
- Jurgen Hubbuch - UNI Karlsruhe – biopharma/HTE
- Henk Noorman – DSM, corporate scientist bioprocess technology, NL
- Gabriele Sadowski – UNI Dortmund, DE - biomaterials
- John Woodley – DTU, DK - ISPR
- Joaquim Cabral – Inst Sup Tech, PT – bioprocess & health
- *To be confirmed*, UK – bio-energy industry
- *To be confirmed* US / non-EU
- Hans Tramper, WUR, NL – course program & e-learning
- Marloes Campo, BBasic/TU Delft, NL – secretary
- Luuk van der Wielen, BBasic/TU Delft, NL - chair

## WG Bioprocess Integration ... timing

- 2008 – propose to ESBES Board (today)
- 2008 - align other stakeholders (EC, EuropaBio, EFChE, various national)
- 2008 - consolidate core team, business plan, budget and (financial) support
- 2009 (early) – workshop to agree on activities
- 2009 (late) – draft course including e-learning (Hans Tramper WUR)
- 2009 (late) – 2<sup>nd</sup> workshop / eConference
- 2010 contribute parallel program at ESBES 2010
  - biorefinery / bio-energy systems
  - biobased performance materials
  - process intensification
  - biobased production systems and societal acceptance
  - bio-value chain and biochemical engineering science

## B-BASIC Bio-based Sustainable Industrial Chemistry

