

## workshops – Monday, 15 September 2008

### Workshop 1: Fundamentals of Industrial Biotechnology

12:00 – 14:30

Are you new to this industry or feel you need to refresh the basics of industrial biotechnology? Perhaps you feel you need to familiarise yourself with the basics of the key technologies, the current status of development and understand future potential and challenges? Run by VTT Technical Research Centre of Finland, the biggest multi-technological contract research organisation in Northern Europe, this workshop is the ideal way to bring you up to speed with the discussion of the main forum agenda.

#### Workshop content

##### Industrial biotechnology market developments

- Overview and short history
- Key technology no 1: microbial fermentation
- Key technology no 2: enzymatic catalysis (biocatalisys)
- Outlining the current status of industrial biotechnology
- Biotechnology in biomass refining: biorefineries
- Future potential and bottlenecks regarding industrial biotechnology



##### Your workshop chair:

Dr Niklas von Weymarn, Chief Research Scientist, VTT TECHNICAL RESEARCH CENTRE, Finland

### Workshop 2: Industrial enzymes and their applications

15:00 – 17:30

This interactive workshop will give you a general introduction to the recent advances in industrial enzymes and the types of applications that are possible and available today. You will gain an insight into the bigger picture of how enzymes can play an important role as drivers for climate change and sustainability.

#### Workshop content

- Overview of recent advances in industrial enzymes and their applications  
**Steen Skjold-Jørgensen, Vice President R&D, NOVOZYMES, US**
- The role of enzymes as drivers for climate change and sustainability
- Exploring the importance of LCAs and how to apply these correctly to enzyme applications
  - Examples of enzyme benefits for CO<sub>2</sub> emission in a range of applications
  - Focus on the biofuels cases**Karen Margrethe Oxenbøll, Director of Sustainability Centre, NOVOZYMES, Denmark**
- The future of enzymes in a carbohydrate based economy  
**Speaker TBC**
- Miniaturising the laboratory into droplets: enzyme engineering and screening in the future  
**Prof Andrew Griffith, Supramolecular Science and Engineering Institute (ISIS), Louis Pasteur Strasbourg University, France**

##### Your workshop chair:

Steen Skjold-Jørgensen, Vice President R&D, NOVOZYMES, US



## Networking drinks reception

17:30

Pre-registration drinks reception  
After workshops on Monday, 15 September 2008

## forum day 1 – Tuesday 16, September 2008

### Plenary session

**08:00** Registration and refreshments

**09:00** Opening remarks from the chair  
**Willy De Greef, Secretary General, EUROPABIO, Belgium**

**09:10 Keynote address: the emerging carbohydrate economy**

- Exploring industrial biotechnology and the many uses of plant matter
- What rules can guide us to achieve social and economic as well as energy and environmental goals?

**Dr David Morris, Director of THE NEW RULES PROJECT and the INSTITUTE FOR LOCAL SELF-RELIANCE, US**

#### Industrial biotechnology market developments

**09:40 Industry keynote address: perspectives and future outlook for a biobased economy – creating sustainable industrial activities**

- Incorporating sustainability in all aspects of society
  - Overview of market sectors that already benefit and those that can benefit from industrial biotechnology
  - Developing viable biobased products that can compete on price and performance
  - Understanding shortcomings, challenges and opportunities for Europe
- Nick Fanandakis, Group Vice President, Applied Biosciences, DUPONT, US**

**10:10 Industrial biotechnology market analysis: turning potential into profits**

- Up-to-date data and projections for adoption of industrial biotechnology within the biofuel and chemical industries
  - Future predictions
  - Feedstock usage
  - Overcoming challenges and industry constraints, especially environment and sustainability issues
- Nicolas Denis, Partner, MCKINSEY & COMPANY, Belgium**

**10:40** Morning refreshments and networking break

**11:10 Achieving a biobased knowledge economy: European roadmap to KBBE**

- What is the KBBE (knowledge-based bio-economy)?
  - Exploring the socio-economic importance of the KBBE
  - Understanding EU strategy on biotechnology
  - Framework programme 7
  - Addressing food, agriculture, biotechnology and the KBBE
  - Forecasted R&D activities for 2009 within KBBE
  - Examining the European Commission and stakeholder dialogue: ETBs (European Technology Platforms), industrial associations and SMEs
  - Analysing the Lead Market Initiative for biobased products
- Dr Alfredo Aguilar, Head of Unit Biotechnology Directorate Food, Agriculture and Biotechnology Research Directorate General, EUROPEAN COMMISSION, Belgium**

**11:40 Exploring the role of the Lead Market Initiative on biobased product development in Europe**

- Evaluating the potential of removing innovation barriers, setting standards, improving procurement and providing access to finance
  - Analysing policy recommendations
  - Ensuring successful outcomes of pilot programmes
- Prof Catia Bastioli, CEO, NOVAMONT, Italy**

**12:10 US perspective: incentivising renewable and biobased products**

- Lessons learnt from initiatives within biofuels and bioplastics
  - Accelerating breakthroughs and research collaboration across the industry
  - A review of the ethanol market boom
- Brent Erickson, Executive Vice President, Industrial and Environmental Section, BIOTECHNOLOGY INDUSTRY ORGANIZATION, US**

**12:40 Asian perspective: evaluating current and future potential and market conditions across the Asia Pacific region for white biotechnology**

- Lessons learnt from China and other growing regions
  - Case studies of key providers have opened research and production facilities
  - Challenges and opportunities
  - Future outlook
- Dr Ling Hua, Director, China Research Centre, GENENCOR, China**

**13:10** Lunch will be served for all speakers and delegates



**Is industrial biotechnology leading to sustainable biobased products?**

14:20



**Introduction from the chair**

Chair: Ian Hudson, President EMEA, DUPONT DE NEMOURS INTERNATIONAL, Switzerland

14:30



**What is the 'value proposition' for switching to a bio-renewable carbon feedstock base?**

Dr Ramani Narayan, University Distinguished Professor, Department of Chemical Engineering and Materials Science, MICHIGAN STATE UNIVERSITY, US

14:55



**Investigating tools for measuring the environmental impact of biobased products: LCAs**

Gary Parker, Sustainability Director, CIBA, UK

15:20

**Sustainability of biobased products: the NGO perspective**

Dr Stephan Singer, Head of European Climate and Energy Policy Unit, WWF, Belgium

15:45 Afternoon refreshments

16:05



**Sustainability and success of biobased products and processes**

Prof Lene Lange, Department Head, Department of Biology, UNIVERSITY OF COPENHAGEN, Denmark

16:30



**Understanding the role of sustainable production and consumption and the Sustainable Industrial Policy action plan**

Dino Pinelli, Directorate General Enterprise and Industry, EUROPEAN COMMISSION, Belgium

16:55

**Panel discussion: innovation and commercialisation – what will make Europe embrace white biotechnology?**

Panel chair: Prof Lene Lange, Department Head, Department of Biology, UNIVERSITY OF COPENHAGEN, Denmark  
Panel participants from this session

17:30

Closing remarks from the chair

17:45 **Drinks reception**

All speakers and delegates are invited to a relaxed and informal drinks reception, providing an opportunity to network and discuss the day's proceedings

**Biorefineries: innovation and new technology**

14:20



**Introduction from the chair**

Chair: Jack Huttner, Vice President, Biorefinery Business Development, GENENCOR, US

14:30



**Exploiting renewable feedstocks: competing with or sharing the food chain?**

Dietrich Klein, Chairman of Working Group Biotechnology/Bioenergy, COPA COGECA, Germany

14:55



**Biorefineries: combined use of biomass as a source of energy, fuels and materials**

Dr George Deerberg, Director of Science, UMSICHT FRAUNHOFER, Germany

15:20



**Global overview of biorefining initiatives and biofuels applications**

Poul Ruben Andersen, Marketing Director, NOVOZYMES, Denmark

15:45 Afternoon refreshments

16:05



**Building the biorefinery business in the future: case study of a working integrated forest biorefinery**

Peter Blomqvist, CEO, PROCESSUM BIOREFINERY INITIATIVE, Sweden

16:30



**Fermentation: a versatile technology utilising renewable resources**

Dr Oskar Zelder, Fermentation Products Specialty Chemicals Research, BASF, Germany

16:55

**Panel discussion: biorefining and biofuels outlook**

Panel chair: Jack Huttner, Vice President, Biorefinery Business Development, GENENCOR, US  
Panel participants from this session

17:30

Closing remarks from the chair

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## exhibition, sponsorship and networking packages

This year you can reach more than 100 of the world's foremost international leaders in industrial biotechnology. These are the most innovative developers, R&D experts and senior policy makers you'll find in white biotechnology – those who work at the cutting edge of the industry who make investments, develop technology, form alliances and take decisions that alter the international landscape of this industry.

This expert audience is coming together in one place expressly to meet their colleagues from around the world, debate issues facing the industry and to view and review the products, services and solutions from our conference sponsors and exhibitors. The global reach and outstanding reputation of EuropaBio assures that the delegates will comprise a broad range of top-level industry professionals and business contacts.

The quality of the delegates means that exhibiting at the *European Forum for Industrial Biotechnology 2008* will provide you with high quality leads – leads that may translate into a direct return on investment.

There are a number of networking and sponsorship packages available and there are a limited number of exhibition opportunities that will enable you to gain exposure to this audience.

Thinking of sending more than 2 delegates to this forum? Why not consider our new networking packages, these could save you money.

For information regarding the exhibition, sponsorship or networking packages please contact Caroline Potapa on +44 (0)1372 802101 or at [caroline.potapa@pira-international.com](mailto:caroline.potapa@pira-international.com)

## forum location: Brussels

Brussels is the ultimate European city. As the headquarters to the EU (European Union) and NATO, it is often referred to as 'The Capital of Europe'. It is an international metropolis – a mosaic of languages, cultures and traditions. Aside from the splendid and varied architectural styles of the city, Brussels also hosts over 80 museums, numerous tourist attractions, a vibrant nightlife and more restaurants than you could count.



The heart of Brussels is at the Grand Place (Grote Markt). Built as a merchant's market in the 13<sup>th</sup> century, this historic market square, with its splendid guild houses and the impressive Gothic beauty of the Town Hall, is widely considered to be one of the most beautiful town squares in Europe. Other picturesque medieval streets, beautiful boulevards, impressive monuments, spacious parks, cosy cafés and distinctive fashion boutiques make Brussels the vibrant city that it is.

To find out more about the conference venue, turn to the **information** page.



### Plenary session

**08:00** Registration and refreshments

**08:30** **Achieving the biobased economy: where are we? Opening remarks from the chair**  
Iain Gillespie, Head of Biotechnology Division, OECD, France

#### *The future of a biobased economy: end-user perspective*

**08:40** **Advances and future potential of biofuels: a truly green alternative?**

- Latest advances in biofuels and uses
- Attitudes, national policies and uptake
- Assessing opportunities and challenges
- Exploring the potential of a second generation of biofuels

**Harri Turpeinen, Vice President Corporate Stakeholder Relations, NESTE OIL CORPORATION, Finland**

**09:10** **Automotive perspective: biomaterials in the automotive sector**

- Recent advances in the use of biomaterials for automotive applications
- Latest developments in biofuels
- Uses of natural fibre composites
- Opportunities and obstacles for biomaterials

**Otmar Hauck, Plastic Parts Unit, VOLKSWAGEN, Germany**

**09:40** **Consumer goods perspective: utilising biotechnology to improve consumer products – opportunities and challenges**

- Enhancing existing products through industrial biotechnology
- Addressing advantages and shortcomings
- Functional product properties

**Neil Parry, Science Area Leader – Biotechnology, UNILEVER RESEARCH, UK**

**10:10** Morning refreshments and networking break

**10:50** **Utilising biotechnology to reach sustainable production for chemicals, materials and pharmaceuticals**

- Evaluating current technologies vs white biotechnology alternatives
- Cost benefit analysis
- Future markets and applications

**Stephan Tanda, Board Member, DSM, Netherlands**

**11:20** **Industrial biotechnology and applications in the personal care industry**

- Growth in industrial biotechnology capabilities and applications
- Exploring application and cost effectiveness
- Identifying the growth in the personal care/cosmetics marketplace
- Evaluating industrial biotechnology applications today and their future potential in this market

**Dr Surinder P Chahal, Technical Director – Enterprise Technologies and Suncare and Biopolymers, CRODA EUROPE, UK**

**11:50** **Industrial biotechnology in the pharmaceutical industry**

- Where are the synergies between industrial and pharmaceutical biotechnology?
- What are the production options today and tomorrow?
- Small and large molecule pharmaceutical production using biosynthesis and biotransformation in contained systems
- A specific interesting example: new biomaterials for pharma applications
- Burning issues and real life business drivers?

**Hans-Peter Meyer, VP Technology Evaluation, LONZA, Switzerland**

**12:20** **Panel discussion: future of biobased materials**

- Differing product and industry specific requirements
- The sustainability concept and what it means for end use applications
- Future predictions on the capabilities of biobased products for 10 years' time

**Panel participants: Stefano Facco, New Business Development Manager, Novamont, Italy, and Volkert Claassen, Vice President White Biotechnology, DSM, Netherlands, plus speakers from this session**



**13:10** Lunch will be served for all speakers and delegates  
Luncheon is kindly sponsored by DSM

Unlimited. **DSM**

**From knowledge to products: overcoming barriers to commercialisation**

14:15

**Introduction from the chair**

Chair: Anindya Mukherjee, Executive VP Industrial Biotechnology, DIREVO BIOTECH, Germany

14:25

**Increasing the public interaction with industrial biotechnology: educating the consumer and the biotechnologist**

Dr Patricia Osseweijer, Managing Director and Programme Leader Genomics and Society, KLUYVER CENTRE, and Assistant Professor, Biotechnology and Society Department of Biotechnology, DELFT UNIVERSITY OF TECHNOLOGY, Netherlands

14:45

**Market entry: assessing the current investment climate in Europe**

Dr Manfred Kircher, President, CLIB2021 (EVONIK INDUSTRIES), Germany

15:05

**The positioning of start-ups in the white biotech domain**

Marc Delcourt, Director R&amp;D, BIOMETHODES, France

15:25

**IB investment: a new sector, a new model**

Martin Austin, Partner, MARRAM ADVISORS, Switzerland

15:45 Afternoon refreshments

16:05

**Case study: putting public-private partnership into practice – analysing first results**

Christophe Rupp-Dahlem, Programme Director, ROQUETTE, France

16:25

**Creating novel bioprocesses by collaborations between academia and industry**

Prof Nicholas J Turner, Director of Centre of Excellence in Biocatalysis, CoEBio3, MANCHESTER INTERDISCIPLINARY BIOCENTRE, UK

16:45

**Panel discussion: collaboration across the value chain – turning innovation into commercial business**Panel chair: Anindya Mukherjee, Executive VP Industrial Biotechnology, DIREVO BIOTECH, Germany  
Panel participants: Dr Manfred Kircher, President, CLIB2021 (EVONIK INDUSTRIES), Germany; Dr Bernhard Mohr, Investment Manager, BASF VENTURE CAPITAL, Germany; Dr Simon Best, Chair, INTERNATIONAL CROPS RESEARCH INSTITUTE, UK; Steen Andersen, CEO, FLUXOME SCIENCES, Denmark

17:30

Closing remarks from the chair and close of conference

**Future outlook: new developments, novel products and research advances**

14:15

**Introduction from the chair**

Chair: Prof Wim Soetaert, Faculty of Bioscience Engineering, GHENT UNIVERSITY, Belgium

14:25

**Producing sustainable chemicals and polymers: new product development in the future**

Philippe Guinot, Business Development, METABOLIC EXPLORER, France

14:45

**Embracing green biotechnology: the importance of green biotechnology in relation to supplying white biotech input**

Dr Bernward Garthoff, Chairman of the Board of DIB, Deutsche Industrievereinigung Biotechnologie, Germany

15:05

**Biosynthesis of innovative tailor-made biopolymers**

Prof Gerrit Eggink, Professor of Industrial Biotechnology, Agrotechnology and Food Sciences Group, WAGENINGEN UR, Netherlands

15:25

**Advances in enzymes: tools for natural food processing**

Johanna Buchert, Research Professor, VTT TECHNICAL RESEARCH CENTRE, Finland

15:45 Afternoon refreshments

16:05

**'Blue sea science': applications of blue biotechnology**

Prof Marcel Jaspars, Marine Biodiscovery Centre, Department of Chemistry, UNIVERSITY OF ABERDEEN, UK

16:25

**Testing chemical intermediates: integrated research from feasibility study to industrial demonstration plant**

Yvon Le Hénaff, General Manager, ARD, France

16:45

**Panel discussion: driving research forward**Panel chair: Prof Wim Soetaert, Faculty of Bioscience Engineering, GHENT UNIVERSITY, Belgium  
Panel participants from this session

17:30

Closing remarks from the chair and close of conference