









**BIOPOLIS S.L.** 

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Consejo Superior de

**Investigaciones Científicas** 



**SYNPOL EU FP7 Project** 



"Biopolymers from Syngas Fermentation























# www.synpol.org

# **Course objectives**

The aim of this course is to provide individuals with an introduction to fermentation concepts in industrial settings and their successful implementation for bioproductions at industrial scale. The course will be lecture-based with visual aids to help the attendees to understand the fermentation principles discussed.

The course will be structured into sections based upon the topics presented. The first section ("Industrial Fermentation Basics") will address topics on bioreactor design including aspects such as ratios, agitator design, sparger design and sterilization of equipment and media. The second section ("Successful Industrial Scale-up Stories") will deal with actual operational issues of industrial fermentation processes that also covers issues involved in scale-up to production size bioreactors.

Discussions about microorganisms employed, culture media, foam control strategies, shear, mixing, aeration, feeds and different types of fermentations and the controls involved will be also addressed.

# presents

**SYNPOL 1st Annual Course on** 

"Industrial Fermentation Processes: **Basics** and Successful Industrial Scale-up Stories"

> Parc Científic Universitat de València, Valencia (Spain) 8th November 2013



The SYNPOL project has received funding from the European Union Seventh Framework Programme (FP7; 2007-2013) under grant agreement no. 311815.



# **SYNPOL's Course on** *Industrial Fermentation Processes*

16:45

### Venue

**Auditorio Marie Curie (Main Building)** 

Parc Científic Universitat de València C/ Catedrático Agustín Escardino nº 9 46980 Paterna (Valencia), Spain

### Registration

Registration contact before course:

drzyzga@cib.csic.es

Attention: No course fee, but limited access!

08:30 on-course Registration Opening

### **Course management**

Chairman: Prof. José Luis García (SYNPOL Project Coordinator; CIB-CSIC, Spain)

Moderator: Dr. Oliver Drzyzga (SYNPOL Project Manager; CIB-CSIC, Spain)

### **Refreshment Breaks**

11:15 Coffee Break (sponsored by BIOPOLIS S.L.)



13:15 Lunch (only free for speakers)

# Morning session: "Fermentation Basics"

09:00 **Opening Announcements** Prof. José Luis García (SYNPOL Project Coordinator; CIB-CSIC, Spain) 09:15 Introduction to Bacterial Fermentation: Aerobic & Anaerobic Mode Prof. Peter Dürre (University of Ulm, Germany) 09:55 Microbial Growth & Biotechnological **Productions in Bioreactors** Dr. Kevin O'Connor (University College Dublin, Ireland) **Bioreactor Design** 10:35 **Dr. Daniel Egger** (INFORS AG, Switzerland)

11:45 Basic Operations with Bioreactors –
Process Control
Prof. Manfred Zinn
(HES-SO, Switzerland)

12:30 Bioreactor Mass & Energy Balances;
Scaling Strategies & Benefits
Speaker

(to be announced)

Afternoon session: "Successful Industrial Scale-up Stories"

**Recombinant Protein Production** 14:30 **Technology at BIOPOLIS** Dr. Marta Tortajada (Biopolis S.L., Spain) 15:00 **Biopolymer Composites Processing Technology and Applications -**A View from BIOPLASTECH Dr. Ramesh Babu (Bioplastech Ltd., Ireland) The OWS Bioreactor Technology for 15:30 **Anaerobic Digestion of Different Waste Streams into Biogas** Bruno de Wilde (Organic Waste Systems N.V., Belgium) **Probiotics Production Technology** 16:00 with Bifidobacterium longum Designed for People with Celiac Disease Prof. Daniel Ramón (Biopolis S.L., Spain) **Course Evaluation & Learning** 16:30 **Outcomes Survey** Prof. José Luis García (SYNPOL Project Coordinator; CIB-CSIC, Spain)

Closing of the course