



SYNPOL's 1st Annual Course on *"Industrial Fermentation Processes: Basics and Successful Industrial Scale-up Stories"*

Valencia (Spain), 8th November 2013

Speaker Profiles



Professor Peter Dürre holds a diploma in biology (1978). He obtained his PhD in 1981 and worked as a postdoc at the University of California Berkeley (1981-1983). Since 1995, Peter Dürre is Professor of Microbiology and Head of the Department of Microbiology and Biotechnology at the University of Ulm in Germany. From 2003 to 2009 he held the position of the Vice President for Research of the University. Peter Dürre has more than 30 years of experience in the field of clostridial physiology and genetics. Major research projects include cell differentiation (spore formation) in clostridia, regulation of acetone and butanol formation in *Clostridium acetobutylicum* and metabolic engineering of solvent-producing strains for industrial use. Another major research focus is the development of autotrophic clostridia as novel microbial production platforms using syngas (CO/H₂ mixtures) and CO₂/H₂ mixtures, especially from waste gas streams or biomass conversion. Medically related projects are construction and application of clostridial recombinant endospores for cancer treatment and identification of acne-causing enzymes in *Propionibacterium acnes* for selective inhibition and disease therapy. Peter Dürre serves as an editor of Applied Microbiology and Biotechnology and was editor and senior editor as well as editorial board member of FEMS Microbiology Reviews, Journal of Molecular Microbiology and Biotechnology, Genome Letters, and Applied and Environmental Microbiology. He is also the author and co-author of more than 100 research articles and reviews as well as being editor of the books 'CRC Handbook on Clostridia', 'Clostridia-Biotechnology and Medical Applications', 'Nucleic Acids Isolation Methods', and 'Regulatory Networks in Prokaryotes'.

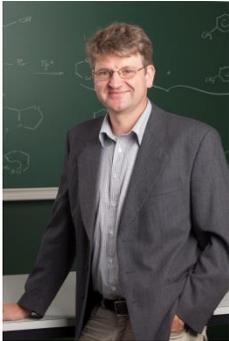


Dr. Kevin O' Connor is a Senior Lecturer at the School of Biomolecular and Biomedical Science & a Principal Investigator at the UCD Conway Institute, Centre for Synthesis and Chemical Biology, and Earth Institute at University College Dublin. Dr. O Connor has published over 75 scientific papers. He has uniquely developed and patented technology for converting waste into a biodegradable plastic. Environmental technologies as well as the application of bio-based products and processes are his key research interest. He has filed 8 patents and licensed 3 patents relating to bioplastics. He served as the Environmental Technology Action Plan (ETAP) representative of the European Commission *ad hoc* committee entitled the "lead market initiative for Bio-based products" and is currently the Irish representative on the EC expert group for bio-based products.



Dipl.-Ing. Daniel Egger (Biotechnology Engineer and MBE) has experience in fermentation of biopolymer producing organisms and bioreactor designs for special application. For several years he had been working at an engineering consultancy designing and qualifying biotech plants. In INFORS HT he took over the product management for the bioreactor portfolio in 2010 and in 2011 the responsibility for

the whole product portfolio as the head of marketing. (INFORS HT, a Swiss SME, is a major constructor of equipment for biotechnology laboratories, which was founded in 1965. It has been constructing shaker incubators, bioreactors and bioprocess control software for decades. Unorthodox ideas, open thinking, a lot of creativity were always the cornerstone of INFORS HT's success. INFORS HT has an unrivaled depth of experience to provide sophisticated solutions for special bioprocesses.)



Prof. Manfred Zinn heads the Department of Biotechnology at HES-SO Valais (Sion, Switzerland). Dr. Zinn is mainly interested in bioprocesses with prokaryotes and eukaryotes. His core activity is the tailor-made biosynthesis of medium-chain-length PHAs in bacteria for industrial and medical applications. With respect to bioprocesses he is designing and optimizing diverse cultivation methods (batch, fed-batch, chemostat, two-stage chemostat, biofilm chambers) and is familiar with up-scaling of fermentation from agar plate to pilot scale (200 L). State-of-the-art in process controlling (on-line analytics) has been developed in his group to assess the performance of cells and bioprocesses. Prof. Zinn has published more than 55 publications in peer reviewed journals, 9 book chapters and proceedings, and filed 3 patents.



Dipl.-Ing. Patrick Sagmeister (with a background in technical chemistry specializing on process engineering) is working as project assistant in the field of bioprocess engineering at the Vienna University of Technology, Austria. Aiming at the development of scalable and efficient industrial bioprocesses, his field of research is the science-based optimization, characterization and model-based analysis of industrial up- and downstream processes. Key publications in this field include the development of novel control algorithms based on mass balances, methods for the efficient processing of fermentation data and novel methods for efficient bioprocess characterization. Next to his scientific career, he is presently working as project manager for the biotech company Exputec GmbH (Vienna, Austria) focusing on the development and implementation of bioprocess characterization and control algorithms.



Dr. Ramesh Babu is Director and responsible for product development for Bioplastech. He is graduated from UDCT, University of Bombay, with a Ph.D. in Chemistry. He has over 15 years of experience in polymer processing, nanocomposites and characterisation. Currently he heads up Polymeric Materials and Nanocomposites group (<http://physics.tcd.ie/pmnc/>) at Trinity College, Dublin. Before joining in Trinity College he have worked in Clariant GmbH and Asahi-Kasei Corporation, Japan, where his work was involved developing polymer based products for various applications including membranes, packaging films, foams and automotive components. His current research encompasses application of polymer composites in various industrial and medical device applications.



Dr. Marta Tortajada has a diploma in Chemical Engineering and a PhD in Automatics and Systems Engineering. During her doctoral thesis she worked in systems biology, constraint-based modelling and expression and immobilization of glycosidic enzymes. She has worked in Biopolis since 2003, and is currently responsible of the Microbial Biotechnology Department, developing contract research on isolation, improvement and manufacturing of recombinant proteins, microbial catalysts, active ingredients and key organic compounds such as chemical synthons and microbial polymers for chemical, pharmaceutical and food industries. Dr. Tortajada has published around 20

papers, patents and contributions to international conferences and participated in several public funded projects, related to the obtaining of biodegradable polymers, and the production of building blocks by fermentation, and several national consortia devoted to biofuels.



Bruno De Wilde is the Laboratory Manager of Organic Waste Systems (OWS) in Ghent, Belgium for whom he has worked for more than 20 years already. In this capacity, he manages biodegradation, composting and digestion tests, supervising a team of almost 40 people. Bruno De Wilde has authored or co-authored about 30 scientific articles. Besides he is an active participant of several ISO and CEN working groups in this field and each year gives about 20 presentations on this topic at international conferences and company workshops. He took his MSc in Agricultural Engineering at the State University of Ghent in 1983, spent another year in the Laboratory of Microbial Ecology and then worked in an R&D project on making energy from biomass through biogasification in Indonesia for 4 years prior to joining Organic Waste Systems.



Prof. Daniel Ramón made his PhD degree working at the Department of Molecular Genetics of the pharmaceutical company Antibióticos S.A. Then he moved to the University of Wageningen, The Netherlands as a post-doc. He was Professor of Food Technology at both the National Spanish Research Council (CSIC) and the University of Valencia. Actually he is CEO of Biopolis S.L., a spin-off of CSIC, and also of Lifesequencing S., a company of massive genome sequencing. His lines of research are: i) microbial biotechnology (selection of microbial starters including probiotics, biochemical, physiological and molecular identification of their industrial relevant traits, scale-up fermentation, strain improvement by both classical mutagenesis techniques and metabolic engineering), and ii) biotechnological production of microbial metabolites (enzymes, functional ingredients, metabolic intermediates). He is author of 120 articles in peer reviewed journals and co-author of 30 patents. He has obtained the European Prize of Divulagation on Science, the Prize of the Spanish Danone Institute, and the National Price in Technology Transfer of the Spanish Government.



Prof. José Luis García, coordinator of Synpol project, is a PhD in Chemistry and Bachelor of Pharmacy from the Complutense University of Madrid (UCM). He has worked as Professor at the UCM and as Head of Research Group in Antibióticos S.A.. He is currently Research Professor at the Biological Research Center (CIB, Madrid) from the Spanish National Research Council (CSIC) where he leads the Environmental Biotechnology group. He has held various positions as manager of Science Policy in the CICYT, as Deputy Director General of Research at the CSIC, and as Advisor in the Ministry of Science and Innovation. He has been President of the Spanish Society of Biotechnology and is currently the National Representative of IDEAS Programme at the EU 7th Framework Programme. His research expertise focuses on various aspects of the fields of biochemistry, genomics and biotechnology with more than 300 publications including articles, books and patents. He has founded two spin-off companies of the CSIC devoted to the analysis of genomes (Lifesequencing S.L.) and genetic diagnosis (Secugen S.L.).



Dr. Oliver Drzyzga is an Environmental Microbiologist. He received his Ph.D. in Microbiology from the University of Oldenburg (Germany, 1996). He pursued postdoctoral works at the University of Marburg, Germany (1997-1998) and at the University of Groningen, The Netherlands (1999-2000). Then he turned to the University of Bremen (Germany) for preparing the habilitation process in Microbiology. In 2004, he was awarded the *venia legendi* for Microbiology and the German academic title of a "Privatdozent" (Private Lecturer, Associate Professor). In January 2005, he joined the Complutense University of Madrid (Spain) to lead works in Genetics and Molecular Biology of newly isolated bacteria with capacities to transform and degrade cholesterol and other steroid compounds. Since October 2012, he works as Project Manager of the EU FP7 project SYNPOL at the Biological Research Center (CIB-CSIC) in Madrid, Spain. Dr. Drzyzga is author and co-author of 50 scientific publications and accumulates 20 years of laboratory and 11 years of teaching and supervising experience.