



## SYNPOL's 4<sup>th</sup> Annual Course on "Biopolymers from bacterial fermentation of syngas"

Madrid (Spain), 09<sup>th</sup> September 2016

### Speaker Profiles

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**Dr J. Ángel Menéndez** graduated from University of Oviedo, Spain, where he received his MSc in Chemistry and PhD in Chemical Engineering in 1988 and 1994, respectively. He worked as research assistant at the Penn State University, USA, from 1995 to 1996. In 1997, he joined INCAR-CSIC in Oviedo, Spain, where he is currently working as a scientific researcher. His research activity is mainly focused in carbon materials and the use of microwave heating applied to industrial processes, leading various research projects on these fields. He is author and co-author of more than 150 scientific publications including various book chapters and patents. He was a former member of the executive committee of the Spanish Carbon Group (GEC) from 2003 to 2011. Dr Menéndez is founder editor of the *GEC Bulletin* (2005-2014) and cofounder of *Xerolutions S.L.*



**Dr Dirk Hebel** is Product Manager Bioreactors at INFORS HT, a well-established supplier of incubation shakers and bioreactors for standard and specialised application. Dirk holds a Master's Degree in Molecular Biotechnology and did his PhD in Biochemical Engineering, both from the TU München, Germany. In his Master's Thesis, he performed reaction engineering analyses of yeasts in lab-scale and in parallelised micro bioreactors. Dirks subsequent PhD thesis focused on protein crystallization in stirred-tank reactors as a novel method for the purification of proteins. Customised designs and lab-automation played an important role during this project. Now, Dirk puts his expertise to good use at INFORS HT for both, taking care of the standard bioreactor portfolio as well as supporting customisation requests and joint research projects with external partners.



**MSc Sabrina Hoffmeister** graduated in Biotechnology and Process engineering at the HFU Villingen-Schwenningen (Germany) in 2010. In 2012 she obtained her Master degree in Biochemistry at the University of Ulm (Germany) and started her PhD thesis at the Institute of Microbiology and Biotechnology under supervision of Prof. Dr. Peter Dürre. The topic of her PhD thesis is the implementation of new pathways into acetogenic bacteria towards production of bulk chemicals from syngas.



**Dr Matthias Raberg** holds a diploma in biology and received his PhD at the 'Westfälische Wilhelms-Universität Münster (WWUM)'. During his PhD thesis at the 'Institute of Molecular Microbiology and Biotechnology' he dealt with various aspects of the metabolism of *Ralstonia eutropha* applying molecular genetics, protein engineering and also proteomic and transcriptomic studies. He continued his work as a lab leader addressing metabolic engineering and analysis of strains from *R. eutropha*, *Oligotropha carboxidovorans* and *Rhodospirillum rubrum* with focus on PHA metabolism. His work resulted in 11 original articles published in *peer reviewed* scientific journals, 2 book chapters as well as 8 contributions to international congresses.



**Dr Gonzalo Durante** is a biologist and biochemist who graduated from Universidad Complutense of Madrid in 2002 (Biology) and 2004 (Biochemistry). Afterwards, he obtained his PhD in Biochemistry and Molecular Biology in 2009. During his doctoral thesis he studied the genetic regulation of aromatic degradation pathways in *Azoarcus* sp. CIB, focusing in a regulator (BzdR), studying its modular structure and generating in the process new chimerical proteins capable to acquire new functions. In 2010, he joined the Victor de Lorenzo's Lab, where he was involved in several projects related to the

design of a biosensor/detoxification system of arsenic, based on the regulator ArsR of *Pseudomonas putida*, and the design of a Cherry protein sensitive to protease-proteasome. In 2013, he joined the laboratory of Dr. Eduardo Díaz where is involved in several projects and driving a challenge project trying to elucidate the role of the sound waves in the microorganisms.



**Dr Olga Revelles** has focused her researcher career in the understanding of microbial physiology and its metabolism. She did her PhD under the supervision of Prof. Juan Luis Ramos (eez, CSIC), where she identified and studied the different pathways involved in Lysine degradation in the soil bacterium *Pseudomonas putida*. Afterwards she received a grant from the Spanish Ministry of Science to do a postdoc of two years at Prof. Sauer's group (ETH, Switzerland), where she got a deep knowledge in the study of microbial metabolism and its regulation by applying tools such as metabolomics and fluxomics. After that, she has been working at INSA (France) with Dr. JC Portai's and Dr. P.

Soucaille's in the field of metabolic engineering of aerobic and anaerobic bacteria. She joined MA Prieto's group to work in SYNPOL project. During this time her research goal was focused in metabolic engineering of bacteria to convert chemically simple carbon precursors to a value-added bio-based product such as bio-plastics. Currently, she is working at D-BSE (Switzerland) in Sven Panke's group.



**Dr Tanja Narancic** is a postdoctoral researcher at the School of Biomolecular and Biomedical Science, at UCD (University College Dublin, Ireland). She holds a PhD in Applied Microbiology from University of Belgrade. Tanja has an extensive background in microbiology, molecular biology, and biocatalysis, and for the past three years has been specialising on waste conversion to biodegradable polymers. Tanja has authored 14 scientific publications and she is responsible for the co-mentoring of Degree, MSc and PhD students at UCD.



**Dr Stephanie Follonier** is senior researcher at HES-SO Valais. She has a Master Degree in Chemical Engineering from EPFL (Switzerland) and she did a PhD in Biotechnology at ETH Zurich and Empa (Switzerland) in 2011. During her doctoral studies she investigated the effect of pressure on the cell physiology and transcriptome of *Pseudomonas putida* KT2440. Her main field of research is related to the bacterial production of poly(3-hydroxyalkanoate) (PHA) with a focus on bioprocess optimization and utilization of waste materials as alternative carbon sources (e.g. fruit pomace, syngas). Her current work at HES-SO involves the design of efficient biotechnological processes for different types of strains (bacteria, yeast, fungi) and products

(biopolymers, vitamins, enzymes) starting from screening at the mL scale to scale-up to the pilot scale (300 L).



**Dipl-Eng Aldo Vaccari** (Electrical Engineer, 1995 at HES-SO Valais Sion, Switzerland) has experience in mechatronics systems control and automation, data acquisition, HMI (Human Man Interface), PLC (Programmable Logic Controller) programming and data logging. He is currently senior researcher at HES-SO Valais and co-responsible for the control and automation laboratory. His main focus is LabVIEW programming and he is a **Certified LabVIEW Associated Developer**. He has been working on projects for both the industry and academia since 20 years

in many different domains including robotics, bioprocess automation, smart grid, energy and seismic simulator. He also teaches automation to apprentices and practical work to system-engineering students.



**Dr Antonia Rojas Martínez**, PhD Biotechnology, Degree in Chemistry by the University of Granada (Spain, 1999). PhD Thesis developed in bioremediation and biocatalysis at the Estación Experimental del Zaidín- CSIC, under the doctorate program of Biotechnology of the University of Granada (2004). Postdoctoral fellow for two years at the Massachusetts Institute of Technology (Cambridge, USA, 2004-2006) at the Chemistry Department, doing research in enzymology. “*Profesor Ayudante Doctor*” at the University of Valladolid (Spain) in the Chemical Engineering department (2006-2007). Since 2007 working in industry, doing research on biofuels and green chemistry within the framework of biorefineries. Since 2009, she is responsible of the Bioenergy laboratory in BIOPOLIS SL (Valencia, Spain) with contributions in 6 european and national project consortia devoted to biofuels and bio-based materials. She participated in 15 patents and publications.



**Dr Laura Morales-Gamez** holds a PhD in Polymers and Biopolymers (outstanding thesis award distinction), a Master of Science in Polymers and Biopolymers both from the Polytechnic University of Catalonia, Barcelona Spain, and a Master 's degree in Environmental Chemical Engineering from the University of the Americas Puebla-Mexico. Her professional experience includes engineering positions in Petrochemical and Fragrance Industry. Had worked as Senior Materials Engineer at Delphi, Mexico Technical Centre (2012), and as a Researcher in the Centre for Research in Nano Engineering (2009-2011), was guest researcher (2010) in Nanostructured Materials Department of Leibniz-Institut für Polymerforschung Dresden, Germany. Currently she is a Materials Scientist for Bioplastech Ltd., a spin out company from UCD and TCD (Dublin, Ireland).



**Ir Kamila Mascart** is a bioscience engineer in environmental protection and management. After obtaining her degree at the Poznan University of Life Sciences (Poland) and the Ghent University (Belgium), she gained experience in life cycle assessment (LCA) and optimisation of wastewater treatment installations. Currently, she is a project engineer at the Sustainability Assessment Services department of Organic Waste Systems (OWS), Belgium. She is responsible for various innovative commercial and European projects, mainly focusing on biodegradability and waste valorisation.



**Isabel de los Ríos** is a chemical engineering graduate of the University of Granada (Spain) and graduated in 2014 with honors. Prior to join BIONET SL (Murcia, Spain) she worked as intern in SABIC Innovative Plastics, first in the Technology and Innovation Department and later in the Technical Department. In 2015, she joined BIONET Engineering as junior process engineer to work in downstream processes for the Biotech Industry. Her responsibilities have been trials design and execution at Downstream Pilot Plant and Process Engineering of Biotech Downstream. Isabel is actually studying the Chemical Engineering Master career at the University of Granada, Spain.



**Dr José Luis García**, primary coordinator of SYNPOL project, has a PhD in Chemistry and Bachelor in 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 7<sup>th</sup> 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. Prof García 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 Environmental Microbiologist. He received his PhD 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). From 2005 to 2011, 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 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 of 50 scientific publications and accumulates 21 years of laboratory and 11 years of teaching and supervising experience.



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