



Preliminary ISBP2016 Programme

Monday, 26.09.2016				09:00-11:00
Registration: 09:00-11:00 (Registration and poster setting)				11:00
Auditorium Atocha				11:00-18:30
Opening and welcome				
	Opening and introduction by delegates from the ISBP016 Organizing Committee and Collaborating Parties		Opening and welcome	11:00-11:30
Session: Trends in the production of polyhydroxyalkanoates Session in memoriam to Prof Bernard Witholt Chair: Alexander Steinbüchel & Auxi Prieto				11:30-13:15
	Plenary ISBP2016 speaker	George Guo-Qiang Chen	The "PHAome"	45'
	Keynote speaker	Manfred Zinn	A continuous success story: Polyhydroxyalkanoate production in chemostat culture.	30'
	Keynote speaker	Kevin O'Connor	The circular bioeconomy: Conversion of non-degradable plastic waste to biodegradable polymers (PHA)	30'
LUNCH and POSTER SESSION				13:15-14:30
Session: Molecular basis for the synthesis and degradation of biopolymers: Metabolic and regulatory networks Chair: Eduardo Diaz				14:30-16:00
	Keynote speaker	Alexander Steinbüchel	Perspectives for biosynthesis of non-biodegradable polythioesters from organic sulphur chemicals and from renewable resources	30'
	Keynote speaker	Juan Nogales	<i>Pseudomonas putida</i> metabolic network: Polyhydroxyalkanoates metabolism as guarantee of optimal metabolic fitness	30'
	Speaker	Janina Jüngert	Stringent response affects PHB Metabolism in <i>Ralstonia eutropha</i>	15'

	Speaker	Alexander Klotz	Crucial role of biopolymers during nitrogen starvation and the recovery of chlorotic <i>Synechocystis</i> sp. PCC 6803 cells	15'
COFFEE and POSTER SESSION				16:00-16:30

Session: Molecular basis for the synthesis and degradation of biopolymers: The key proteins				16:30-18:30
Chair: Kevin O'Connor				
	Keynote speaker	Dieter Jendrossek	Polyhydroxyalkanoates, Polyphosphates, Polyisoprenes	30'
	Speaker	Takeharu Tsuge	PhaC Box: Change the Designation of Lipase Box-Like Sequence	15'
	Speaker	Stephanie Bresan	Polyhydroxyalkanoate (PHA) granules have no phospholipids	15'
	Speaker	Natalia Tarazona	New advances on the elucidation of the interactome of PHA granules in <i>Pseudomonas putida</i>	15'
	Speaker	Tony Tumlirsch	Identification and in Vivo Analysis of a Novel Polyphosphate (polyP) Granule Associated Protein (Phosin) that Recruits Glutamine Synthetase, Phosphopyruvate hydratase (Enolase) and Ribosome Proteins in <i>Ralstonia eutropha</i>	15'
	Speaker	Sirimaporn Watcharakul	Properties of the Latex Clearing Protein from <i>Rhodococcus rhodochromus</i> (LcpRr)	15'
	Speaker	Wolf Dieter Röther	Molecular insights in the cleavage of rubber by latex clearing protein	15'

Tuesday, 27.09.2016				09:00-10:45
Auditorium Atocha				
Session: Bio-based polymer production: Systems and synthetic Biology				
Chair: George Guo-Qiang Chen				
	Keynote speaker	Sang Yup Lee	Metabolic engineering for the production of natural and non-natural polyesters	30'
	Keynote speaker	Victor de Lorenzo	Credentials of <i>Pseudomonas putida</i> as a real (not metaphoric) Cell Factory	30'
	Speaker	Han Zhao	Construction of highly efficient expression systems in <i>Halomonas</i> based on orthogonal transcriptional machinery	15'
	Speaker	Cristina Herencias	Deciphering the metabolism of the predatory bacteria <i>Bdellovibrio bacteriovorus</i> HD100, an efficient lytic tool for PHA recovery	15'
	Speaker	Gonzalo Durante	Engineering new carbon monoxide-oxidizing biocatalysts for PHA production	15'
COFFEE and POSTER SESSION				10:45-11:30
Session: Bio-based polymer production: Systems and Synthetic Biology				11:30-13:00
Chair: José Luis García				
	Keynote speaker	Peter Dürre	Synthesis of monomers and polymers from syngas by autotrophic acetogenic bacteria	30'
	Speaker	Qingsheng Qi	Engineering the CO ₂ reduced pathway for polyhydroxybutyrate biosynthesis	15'
	Speaker	Tian Li	Microbial synthesis of 5-aminolevulinic acid (ALA) and its co-production with polyhydroxybutyrate (PHB)	15'
	Speaker	Alejandro Muñoz de las Heras	Improving poly-3-D-hydroxybutyrate production from xylose in <i>Saccharomyces cerevisiae</i> under different oxygen levels	15'
	Speaker	Ryan Kniewel	Development of a cell self-disruption system for the release of PHA from <i>Pseudomonas putida</i>	15'
LUNCH and POSTER SESSION				13:00-14:30
Session: Bio-based polymer production: Metabolic engineering				14:30-16:00
Chair: Peter Dürre				
	Keynote speaker	Ignacio Poblete-Castro	The long journey: From strain design to the efficient production and recovery of	30'

			polyhydroxyalkanoates using <i>Pseudomonas putida</i> strains	
	Speaker	Daniel Heinrich	Syngas-derived mcl-PHA synthesis in engineered <i>Rhodospirillum rubrum</i>	15'
	Speaker	Xiaofei Wang	Metabolic modelling of dissolved oxygen impacts on substrate competition and PHA production performance by mixed microbial cultures	15'
	Speaker	Karel Olavarria Gamez	A modified <i>Escherichia coli</i> strain for the production of polyhydroxybutyrate in glucose-limited continuous cultures	15'
	Speaker	Nadir Naveed Siddiqui	Mutagenesis studies of glucosyltransferase for the production of biopolymer from <i>Leuconostoc mesenteroides</i> KIBGE-IB22M20	15'
COFFEE and POSTER SESSION				16:00-18:00
Tourist activities & Congress Dinner				

Conference Room Cibeles				
Session: Applications and commercialization of biopolymers and bio-based polymers: Material innovation				14:30-16:00
Chair: Luc Averous				
	Keynote speaker	Friedrich Srienc	Challenges of synthesizing PHAs with desired properties	30'
	Speaker	James Wang	Improving the performance of bio-based polymers through material innovation	15'
	Speaker	Yi-Ming Ma	Synthesis and characterization of comb-like polyhydroxyalkanoate-graft-poly(N-isopropylacrylamide)	15'
	Speaker	Ching-Hung Lan	Interfacial interaction and crystallization behavior of poly(3-hydroxybutyrate) nanocomposites with modified silica nanoparticles: Effect of surface modifiers	15'
	Speaker	Pietro Buono	New functional lignin-based polymeric materials: synthesis, processing and characterisation	15'
COFFEE and POSTER SESSION				16:00-18:00
Tourist activities & Congress Dinner				

Wednesday, 28.09.2016				
Auditorium Atocha				
Session. Challenges in Bioprocess design: Pure and mixture cultures and new feedstocks (I)				09:00-10:45
Chair: Dieter Jendrossek				
	Keynote speaker	Lars Blank	P4SB – From plastic waste to plastic value using <i>Pseudomonas putida</i> Synthetic Biology	30'
	Speaker	James Winterburn	Waste valorisation routes for polyhydroxyalkanoate production	15'
	Speaker	Stéphanie Follonier	Synthesis of poly(3-hydroxyalkanoate) biopolymers by syngas fermentation with <i>Rhodospirillum rubrum</i> : Process analytical technology as a tool for bioprocess optimization	15'
	Speaker	Sebastian Riedel	Polyhydroxyalkanoates production from biogenic waste streams - fermentation towards industrial use	15'
	Speaker	Allison Pieja	Scale-up and commercialization of PHA production from methane	15'
	Speaker	Amparo Jiménez Quero	Itaconic and fumaric acids, value-added chemicals from lignocellulosic biomass, towards biobased polymers elaboration.	15'
COFFEE and POSTER SESSION				10:45-11:30
Session. Challenges in Bioprocess design: Pure and mixture cultures and new feedstocks (I)				11:30-13:00
Chair: Maria Reis				
	Keynote speaker	Luiziana Da Silva	<i>Burkholderia sacchari</i> : a Brazilian microbial platform for polyhydroxyalkanoate (PHA) production	30'
	Speaker	Anna Ferre Guell	Production of Poly(3-hydroxybutyrate-co-3-hydroxyvalterate) copolymers in <i>Haloferax mediterranei</i>	15'
	Speaker	Diana Filipa Araújo	Chitin-glucan complex production by <i>Komagataella pastoris</i> : Tailored composition as a function of glucose and xylose concentration and co-production of xylitol	15'
	Speaker	Paul Fontaine	Effect of glycerol/octanoate co-assimilation at different ratios on medium chain length polyhydroxyalkanoates biosynthesis in <i>Pseudomonas putida</i> mt-2	15'
	Speaker	Federico Cerrone	Strategies for high cell density fermentations with grass	15'

			derived feedstock	
LUNCH and POSTER SESSION				13:00-14:30
Session. Challenges in Bioprocess design: Pure and mixture cultures and new feedstocks (II) Chair: Manfred Zinn				14:30-16:00
	Keynote speaker	Maria Reis	New challenges on biopolymer production by mixed microbial cultures	30'
	Speaker	Andrea Fra-Vázquez	Effects of nitrification activity on an enriched mixed microbial culture for polyhydroxyalkanoates production	15'
	Speaker	Paul Etienne	Robust continuous bioplastic (polyhydroxyalcanoates) production in a two-stage open culture under P-limited growth condition	15'
	Speaker	Diogo Queirós	Valorization of hardwood sulfite spent liquor through polyhydroxyalkanoates production	15'
	Speaker	Ana Morgado Ferreira	Biopolymers production by microbial consortium engineering under continuous reactors and dual nutrient limitation	15'
COFFEE and POSTER SESSION				16:00-16:30
Session. Challenges in Bioprocess design: Pure and mixture cultures and new feedstocks (II) Chair: Luiziana Da Silva				17:00-18:00
	Speaker	Tania Palmeiro Sánchez	PHA production from fermented tuna processing wastewater	15'
	Speaker	André Freches	Microbial selection strategies for PHA production from crude glycerol: effect of OLR and cycle length	15'
	Speaker	Markus Neureiter	High cell-density production of P3HB in a membrane bioreactor	15'
	Speaker	Saisamorn Lumyong	Poly (L-lactic acid) (PLLA) biodegradation and cheap media optimization by <i>Amycolatopsis</i> sp. strain SCM-MK2-4 from soil in northern Thailand	15'
Conference Room Cibeles Session: Applications and commercialization of biopolymers and bio-based polymers: Materials for medical and industrial uses (I) Chair: Ipsita Roy				09:00-10:45
	Keynote speaker	Bernd Rehm	Design of bacterial cell factories for the manufacture of functional materials for medical and industrial uses	30'

	Speaker	Valerie Langlois	Tailoring functional PHA-based materials for biomedical applications	15'
	Speaker	Bruce Ramsay	PHA latexes and covalent immobilization of bioactive proteins	15'
	Speaker	Pooja Basnett	Polyhydroxyalkanoates (PHAs) for the development of bioresorbable drug eluting coronary stents	15'
	Speaker	Ekaterina Shishatskaya	Biocompatibility investigations of natural biopolymers	15'
	Speaker	Carine Mangeon	Bio-based poly(3-hydroxyalkanoate)/ multi-walled carbon nanotube electrospun scaffolds	15'
COFFEE and POSTER SESSION				10:45-11:30
Session: Applications and commercialization of biopolymers and bio-based polymers: Materials for medical and industrial uses (I) Chair: Friedrich Srienc				11:30-13:00
	Keynote speaker	Julio San Román	Functional polymeric systems based on chitosan: application of cryogelation technologies to drug delivery systems and tissue engineering	30'
	Speaker	Daixu Wei	Mobile cell castle: Highly open porous polyhydroxyalkanoates microspheres as spheroidal scaffolds for stem cell growth	15'
	Speaker	Renard Estelle	Renewable copolyesters based on Poly(3-hydroxyalkanoates) and Isosorbide	15'
	Speaker	Hima Puthussery	Poly(3-hydroxybutyrate) microspheres as novel controlled drug delivery systems in photodynamic therapy	15'
	Speaker	Jing Han	Production of feature-specific O-PHBV by <i>Haloferax mediterranei</i>	15'
LUNCH and POSTER SESSION				13:00-14:30
Session: Applications and commercialization of biopolymers and bio-based polymers: Materials for medical and industrial uses (II) Chair: Bernd Rehm				14:30-16:00
	Keynote speaker	Jesús Pérez-Gil	Design, development and production of nanocarriers and nanovehicles	30'
	Speaker	Quang Trong Nguyen	Biopolymer membranes with dual porosity: a novel	15'

			type of scaffold for human cell culture	
	Speaker	Isabel Orlando	Drug-free antibacterial hybrid biopolymers for medical application	15'
	Speaker	Yasemin Günaydın	A novel bioactive, biodegradable wound dressing film	15'
	Speaker	Filomena Freitas	Biological adhesive based on medium chain length polyhydroxyalkanoate produced by <i>Pseudomonas chlororaphis</i> from glycerol	15'
COFFEE and POSTER SESSION				16:00-16:30
16:30-18:00 Session: Applications and commercialization of biopolymers and bio-based polymers: Materials for medical and industrial uses (II) Chair: Julio San Román				16:30-18:00
	Keynote speaker	Ipsita Roy	Natural polymers of bacterial origin and their medical applications	30'
	Speaker	Erica Gea Rodi	Effect of <i>Miscanthus giganteus</i> on PHBV matrix: numerical modeling contribution on the evaluation of the mechanical properties	15'
	Speaker	Anatoly Boyandin	Polyhydroxyalkanoates of different chemical structure: Synthesis, studies, applications	15'
	Speaker	Tina Modjinou	Water soluble poly(3-hydroxyalkanoate) prepared by a photoinitiated process	15'
	Speaker	Natalia Zhila	A study of synthesis and properties of poly-3-hydroxybutyrate/diethylene glycol copolymers	15'

Industry Day - Thursday, 29.09.2016				
Conference Room Cibeles				
Session: Synthesis of bio-based polymers: The industrial view (I)				09:30-11:00
Chair: José Luis García				
	Keynote speaker	Luc Averous	Development of biobased macromolecular architectures with building blocks obtained from different biomass, for a new generation of renewable polyurethanes	30'
	Speaker	Ramesh Babu	Biobased biodegradable polymer composites	20'

	Speaker	Alba Ortiz	Synthesis of new polymers derivatives from bio-dicarboxylic acids	20'
	Speaker	Consuelo Escrig	Tailor made suitable bioplastics to manufacture nets	20'
COFFEE and POSTER SESSION				11:00-11:30
Session: Bio-based polymers and Bioeconomy Chair: <i>tbd</i>				11:30-13:00
	Keynote speaker	Pilar de Miguel	Green policy in Spain. The transition to bioeconomy: Funding Opportunities for Spanish Industries	30'
	Speaker	Jordi Simón	Added value of biodegradable and compostable plastics: a key for circular economy	20'
	Speaker	Aida Fernando	Waste management of biodegradable and compostable bags	20'
	Speaker	M. de Guía Blanco	Review of European market demand and raw biodegradable material supply for food packaging Industry	20'
LUNCH and POSTER SESSION				13:00-14:30
Session: Synthesis of bio-based polymers: The industrial view (II) Chair: <i>tbd</i>				14:30-16:40
	Keynote speaker	Yoshiharu Doi	Progress in science and technology of PHA polymers	30'
	Speaker	Shunsuke Sato	Environment compatible Kaneka biopolymer AONILEX	20'
	Speaker	Molly Morse	Commercializing PHA-MANGO	20'
	Speaker	Marta Tortajada	Synthesis of polyhydroxyalkanoates from maize manufacturing byproducts	20'
	Speaker	Pablo Pomposiolo	Synthetic biology tools for downstream processing of bioplastics	20'
	Speaker	Rafael Mira	ITC-Packaging	20'
Closing ISBP2016				16.40-17.00
		Auxi Prieto	From academy to industry: Scientific challenges towards 2020	20'
Poster awards and announcement of next ISBP edition				