

FORMULA XII – Scientific Program

Sunday, 15th June

Time	Event
17:30 – 19:00	Registration – Hotel Millennium, Floor 2
19:00 – 21:00	Get-together party

Monday, 16th June

Time	Event	
MONDAY, 16 TH JUNE: MORNING SESSION – Halls Millennium 2 & 3		
Chair: Prof. Jordi Esquena-Moret		
9:00 – 9:10	Welcome and Formula XII opening	
9:10 – 9:55	Plenary talk 1: Digital and physical microfluidic systems for discovery of green cleaning formulations João Cabral, Imperial College London, UK	
9:55 – 10:25	Keynote talk 1: Tips and tricks on optimizing lipid based DDS to increase oral peptide absorption Anette Müllertz, University of Copenhagen, Denmark	
10:25 – 10:50	Coffee break	
	Hall Millennium 2 Formulation design: sustainability and disruptive innovations 1 Chair: Dr. Malcolm Faers	Hall Millennium 3 Formulation and delivery of hydrophobic drugs, biologics and other bio-actives 1 Chair: Prof. Anette Müllertz
10:50 – 11:10	Natural deep eutectic solvents for sustainable cosmetic emulsions: assessment of different stabilization strategies Florence Agnely, Université Paris-Saclay, CNRS, France	Industrial case study on process modelling application in drug product development Bindhu Gururajan, Novartis Pharma AG, Basel, Switzerland
11:10 – 11:30	Innovative application of nano-emulsions in the production of freeze-dried make-up compact Shola Mathys, Université Claude Bernard Lyon, France	In vitro methods for assessing performance of amorphous formulations of Atazanavir Mark McAllister, Biowaived Ltd, UK
11:30 – 11:50	Formulating non-aqueous emulsions: The role of asphaltenes in the stability of surrogate pyrolysis wood oil in fuel emulsions Jesus F. Ontiveros, ENSCL-Centrale Lille, France	Investigating the indirect pH effect on drug solubility in human intestinal fluids Mare Oja, KU Leuven, Leuven, Belgium
11:50 – 12:10	Innovative formulations via low energy emulsification Jesus Pitarch Lopez, Clariant	Mixed taurodeoxycholate/fatty acids micellization and fenofibrate solubilization explored by molecular dynamics simulations Fatmegyul Mustan, Sofia University, Bulgaria
12:10 – 14:00	Lunch	

MONDAY, 16TH JUNE: AFTERNOON SESSION		
<i>Chair: Prof. Werner Kunz</i>		
14:00 – 14:45	Plenary talk 2: How to control surfactant self-assembled structure to produce gel emulsions? Anne-Laure Fameau , INRAE, UMET unit, Villeneuve d'Asq, France	
14:45 – 15:15	Keynote talk 2: Microneedle-mediated high-dose and long-acting drug delivery Ryan F. Donnelly , Queen's University, Belfast, UK	
15:15 – 15:40	<i>Coffee break</i>	
15:40 – 17:00	PARALLEL SESSIONS	
	Hall Millennium 2 Fundamental science: mechanisms, structure-function relationship and theoretical modelling 1 <i>Chair: Dr. Frank Runge</i>	Hall Millennium 3 Formulation and delivery of hydrophobic drugs, biologics and other bio-actives 2 <i>Chair: Dr. Mark McAllister</i>
15:40 – 16:00	Emulsion as template of porosity for 3D printing of ceramic based on halloysite Cecile Pagnoux , IRCER Université de Limoges, France	Enzymatically synthesised polymers as novel excipients for the nano formulation of Vitamin D Eleni Axioti , University of Nottingham, UK
16:00 – 16:20	Understanding oil foam stabilization using hydrocarbon-based surfactants without the presence of particles Smaragda-Maria Argyri , INRAE, University Lille, CNRS, France	Drug dissolution kinetics prediction based on computational fluid dynamics Nadya Politova-Brinkova , Sofia University, Bulgaria
16:20 – 16:40	Sucrose esters vs. Brijs: Polar head and chain length effects on temperature-dependent foaming properties Lucie Delforce , Sofia University, Bulgaria	Effect of quaternary ammonium compounds (QACs) on the disruption of pathogen transmission Daniele Remoli , University of Birmingham, UK
16:40 – 17:00	Tuning yogurt structure with protein addition Roland Ramsch , Speclz SAS, France	Investigating size-dependent "bio-nano" interactions of organosilica nanomaterials in the context of murine immune cells Simon Corrie , Monash University, Australia
17:00 – 19:00	POSTER SESSION 1 – Hall Millennium 1	

Tuesday, 17th June

Time	Event	
TUESDAY, 17 TH JUNE: MORNING SESSION		
Chair: Prof. Alain Durand		
9:00 – 9:45	Plenary talk 3: Order and disorder in pharmaceutical solids Thomas Rades, University of Copenhagen, Denmark	
9:45 – 10:15	Keynote talk 3: Colloid, interface, and foam properties of water-soluble polyglycerol esters solutions Jordan Petkov, Sofia University; Arxada; The University of Manchester	
10:15 – 10:40	Coffee break	
10:40 – 12:00	PARALLEL SESSIONS	
	Hall Millennium 2 Formulation design: sustainability and disruptive innovations 2 Chair: Dr. Roland Ramsch	Hall Millennium 3 Controlled release formulations Chair: Prof. Gavin Andrews
10:40 – 11:00	A stepwise scientific approach for designing future crop protection suspension concentrate formulations for emerging UAV, very-low volume and precision application technologies Malcolm Faers, Bayer AG	Emerging nano-formulations for targeting antimicrobial resistance and bacterial biofilms Vesselin Paunov, Nazarbayev University, Astana, Kazakhstan
11:00 – 11:20	Design of binary surfactant formulations for enhanced heavy oil recovery by cyclic injection processes Ronald Mercado, Universidad Industrial de Santander, Colombia	Functionalized calcium carbonate microparticles in ethyl cellulose films: A vehicle for sustained amoxicillin release Petru Niga, RISE Research Institute of Sweden
11:20 – 11:40	Microfluidic preparation of chitosan nanoparticles with either negative or positive surface charge Jana Mounzer, Université Claude Bernard Lyon, France	Efficient drug delivery to interfaces using photoswitchable arylazopyrazoles Björn Braunschweig, University of Münster, Germany
11:40 – 12:00	Foam decoding of shampoos Andrés Cardozo, L'Oréal R&I	Computational methods in preformulation screening Christophe Tistaert, Johnson & Johnson Innovative Medicine, Belgium
12:00 – 14:00	Lunch	

TUESDAY, 17TH JUNE: AFTERNOON SESSION		
<i>Chair: Prof. Veronique Rataj-Nardello</i>		
14:00 – 14:45	Plenary talk 4: Advanced formulation strategies for controlling product functionality Krassimir Velikov , Unilever, The Netherlands	
14:45 – 15:15	Keynote talk 4: Poloxamer self-assembly modulated by solvents Paschalis Alexandridis , University at Buffalo, The State University of New York, USA	
15:15 – 15:40	<i>Coffee break</i>	
15:40 – 16:40	PARALLEL SESSIONS	
	Hall Millennium 2 Fundamental science: mechanisms, structure-function relationship and theoretical modelling 2 <i>Chair: Assoc. Prof. Ulla Elofsson</i>	Hall Millennium 3 Formulation performance and measurement techniques <i>Chair: Prof. Krastanka Marinova</i>
15:40 – 16:00	How to stabilize emulsions with flavonoid crystals? Nicolas Huang , Université Paris-Saclay, CNRS, France	Quantifying the consumer experience: relating mouthfeel to the foaming properties of toothpastes Katharina Wulz , KRÜSS GmbH
16:00 – 16:20	Temperature-induced dynamics of triglyceride droplets: From fragmentation to double w/o/w emulsion formation Diana Cholakova , Sofia University, Bulgaria	Biobased aqueous formulations: self-aggregation and coacervation of rhamnolipids Matilde Tancredi , University of Naples Federico II, Italy
16:20 – 16:40	Preparation of protein microgels through nonionic surfactant + gelatin water-in-water (w/w) emulsions Jonathan Miras Hernández , Institute for Advanced Chemistry of Catalonia, Spain	DNA-Gelatin coacervates prepared by ionic complexation Susana Vilchez Maldonado , Institute for Advanced Chemistry of Catalonia, Spain
16:40 – 17:00	Effect of cholesterol on biomimetic membrane curvature and coronavirus fusion peptide encapsulation Leonie van't Hag , Monash University, Australia	Natural solubilizers – A pool of smart and specific compounds Eva Müller , University of Regensburg, Germany
17:00 – 18:30	POSTER SESSION 2 – Hall Millennium 1	
19:00 – 22:00	OFFICIAL DINNER	

Wednesday, 18th June

Time	Event	
WEDNESDAY, 18 TH JUNE: MORNING SESSION		
Chair: Prof. Epameinondas Leontidis		
9:00 – 9:45	Plenary talk 5: Supporting formulation with Cryo-EM Dganit Danino , Technion-Israel Institute of Technology, Israel; Guangdong-Technion Israel Institute of Technology, Shantou, China	
9:45 – 10:15	Keynote talk 5: Surface forces of polymers and surfactants for the cosmetic substrate. Transition to eco design of sustainable formulations Gustavo S. Luengo , L'Oréal Research and Innovation, Aulnay sous Bois, France	
10:15 – 10:40	Coffee break	
10:40 – 12:20	PARALLEL SESSIONS	
	Hall Millennium 2 Formulants: sourcing, lifecycle, safety and performance Chair: Dr. Jean-Christophe Castaing	Hall Millennium 3 Automation and AI/ML in formulation design, performance and process optimization Chair: Prof. Cécile Pagnoux
10:40 – 11:00	Cryogenic wormlike micelles from ultra-long-chain alkenyl glucosamine: A new generation of anti/deicing fluids Yujun Feng , Sichuan University, China	Patient robots for sluggish samples: High-throughput screening of formulation stability Jens Meissner , BASF, Germany
11:00 – 11:20	Silk lipopeptide surfactants: Mechanochemical synthesis, properties and characterization Lara Wehbe , Université de technologie de Compiègne, France	Multi-scale model-based process optimization of the downstream processing after chemical recycling of polyurethanes Christophe de Graaf , iPRACS, University of Antwerp, Belgium
11:20 – 11:40	Methodology for valorizing antioxidant plant extracts as cosmetic active ingredients: Case of <i>Dimocarpus longan</i> Line Marschal , CNRS, Université de Lille, France	Emulsion inversion process of polyester resin monitored in situ by torque and light backscattering Christel Pierlot , CNRS, Centrale Lille, France
11:40 – 12:00	New amphiphilic structures from vegetable oil and properties evaluation Cécile Joseph , ITERG, France	Theoretical model for worm-like micelles formation Zlatina Mitrinova , Sofia University, Bulgaria
12:00 – 13:30	Lunch	

WEDNESDAY, 18 TH JUNE: AFTERNOON SESSION		
13:30 – 14:50	PARALLEL SESSIONS	
	Hall Millennium 2 Fundamental science: mechanisms, structure-function relationship and theoretical modelling 3 <i>Chair: Dr. Karin Persson</i>	Hall Millennium 3 Formulation design: sustainability and disruptive innovations 2 <i>Chair: Dr. Ulf Schroder</i>
13:30 – 13:50	Comprehensive study of colloidal systems formed by electrostatic interactions between gum arabic and chitosan Alain Durand , Université de Lorraine, CNRS, France	Innovative biostimulant formulation: overcoming challenges for an enhanced field performance Lucie Reinišová , Fytekko, Belgium
13:50 – 14:10	Decoding surfactant-chelating agent interactions: Impact of the molecular structure on the interaction strength and solution behavior Josmary Velásquez , Chalmers University of Technology, Sweden	Calcium-induced cross-linking for the mechanical stabilization of vegan polysaccharide-based candies Arturo Winters , ETH Zurich, Switzerland
14:10 – 14:30	Detergents at work: New insights into the physical mechanisms of grease cleaning Matthias Kellermeier , BASF, Germany	Levulinic acid as a green solvent for the production of lignin-based delivery systems of agrochemicals Carlo Carandente Coscia , University of Naples - Federico II, Italy
14:30 – 14:50	Bubbles nucleation in supersaturated emulsion drops – physicochemical and kinetic control during mixing Ivan Lesov , Sofia University, Bulgaria	New lyotropic complex fluid structured in sheets of ellipsoidal micelles solubilizing fragrance oils Vera Tchakalova , DSM-Firmenich SA
14:50 – 15:00	<i>Short break</i>	
15:00 – 15:45	<i>Chair: Dr. Petra Allef</i> Plenary talk 6: Physicochemical approach to surfactant formulations Nikolai Denkov , Sofia University, Bulgaria	
15:45 – 16:00	Closing remarks and Farewell	