

# 4<sup>th</sup> European Conference on Pharmaceutics

Advanced technologies enabling new therapies

## Marseille France

20 - 21 March 2023



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20 - 21 March 2023, Marseille, France

#### Dear Colleague,

Following the great success of the last three European Conferences, which were held in Reims, Krakow and Bologna it is our great pleasure to announce the fourth congress of this new series of international meetings, which will be held in Marseille, France, on 20 - 21 March 2023. It will be dedicated to "Advanced technologies enabling new therapies".

The European Conferences on Pharmaceutics are held every two years (in March/April of the uneven years). They are jointly organized by the A.D.R.I.T.E.L.F. ("Italian Association of Pharmaceutical Technology and Law"), APGI ("International Society of Drug Delivery Sciences and Technology") and APV ("International Association for Pharmaceutical Technology").

The aim is to help bridging the gap between fundamental academic research and industrial applications, offering the opportunity to initiate fruitful exchange and cooperation between university and industry. The conference will be a perfect occasion for young as well as for established scientists from academia and industry from all over the world to present their work, network, discuss newest scientific findings and to share their experience with colleagues.

#### Hot topic session

- Oral drug delivery
- Advanced therapies
- In-silicio simulations
- Personalised medicines

World-wide leading experts in the field will give plenary lectures and invited talks on hot topics. They will give overviews on the current state of the art in the respective domains and outlooks on future perspectives. In addition, latest research findings will be presented in the form of short talks, selected from submitted abstracts. Furthermore, poster presentations will give the opportunity to get an update on the most recent research in pharmaceutics and to personally exchange with the authors.

An industrial exhibition will accompany the conference and allow learning about the latest trends and newest products in the area of pharmaceutical ingredients, developing & processing equipment, analytical technologies, medicinal products, medical devices, contract manufacturing and many other fields.

All coffee and lunch breaks as well as the welcome reception will be included in the registration fees and be held in the industrial exhibition and poster presentation area in order to facilitate discussions between participants, exhibitors and presenters.

We are looking forward to seeing you at the 4th European Conference on Pharmaceutics in Marseille in 2023.

Paolo Calicetti
President ADRITELF



vergen/Siepmann resident APGI



Jörg Breitkreutz President APV



#### Programme committee

#### Chair of the programme committee

Amélie Bochot, Universit of Paris-Sud, France

#### Programme committee

Jörg Breitkreutz, University of Duesseldorf, Germany Anna-Maria Fadda, University of Cagliari, Italy Paola Minghetti, University of Milan, Italy Juergen Siepmann, University of Lille, France Florian Unger, Bayer, Germany



#### Programme

#### Monday, 20 March 2023



#### 09:00 Opening ceremony

#### Plenary lecture

- 09:30 Digital health and treatments of the future Saso Jezernik, Takeda, Switzerland
- 10:30 Coffee/exhibition/posters

#### Invited talks: Innovation in oral drug delivery

- 11:00 GUT physiology is important for poorly soluble drugsPatrick Augustijns, University of Leuven, Belgium
- 11:40 Tuning SNEDDS for optimal absorption of poorly soluble drugs Anette Müllertz, University of Copenhagen, Denmark
- 12:20 Oral Peptide Delivery: A Realistic View Stephen Buckley, Novo Nordisk, Denmark

## Short talks: Nanoparticles and vesicles / Nucleic acid delivery / Controlled drug delivery

- 11:00 Herbal-mediated synthesized zinc oxide nanoparticles versus plant extracts: a comparison between synthesis processes and antihyperglycemic activity
  Espoir Kambale Kavungere, Catholic University of Louvain, Belgium
- 11:10 Iron oxide nanoparticles face to Leishmania infected macrophages: food or poison for the parasites?
  Carmen Palomino Cano, University of Navarra, Spain
- 11:20 Development of Micro and Nanoemulsions for Intranasal Delivery of the neuroprotectant Nestorone to the brain Adriana Santos, University of Beira Interior, Portugal
- 11:30 Bioactive Self-assembling Nanoparticles to Tackle Neurodegeneration Valeria Nele, University of Naples Federico II, Italy
- 11:40 Triglyceride-filled albumin nanocapsules: A new system to avoid discarding poorly-water soluble drug candidates?

  Sarah Hester, University of Muenster, Germany

- 11:50 Novel Brain-Targeted Nanoparticles Optimized for Cholesterol Delivery to Huntington's Disease Brain
  Riccardo Caraffi, University of Modena and Reggio Emilia, Italy
- 12:00 Comparing mixing technologies for the manufacturing of lipid nanoparticles
  Marcel Arndt, Evonik Operations GmbH,
  Germany
- 12:10 Artificial lipopeptides for Cas9 ribonucleoprotein delivery Ulrich Lächelt, University of Vienna, Austria
- 12:20 Endosomal release and improved efficacy of protamine-based miRNA nanocarriers Ivana Ruseska, University of Graz, Austria
- 12:30 Self-assembly of small molecules into inflammatory-responsive microgels for treating osteoarthritis

  Zhenyang Wei, University of Helsinki, Finland
- 12:40 Development of tailored local treatments for the post-surgical microenvironment of glioblastoma Chiara Bastiancich, University of Turin, Italy
- 12:50 Hyaluronic acid-coated liposomes for targeting CD44 receptor on proinflammatory macrophages
  Elias Fattal, University of Paris-Saclay, France
- 13:00 Lunch/exhibition/posters

#### Invited talks: Advanced therapies

- 15:00 Nanomedicine for RNA delivery: where are we? Giuseppe de Rosa, University of Naples, Italy
- 15:40 Current status of animal models to assess the effectiveness of novel regenerative therapies Catherine Le Visage, University of Nantes, France
- 16:20 Advances in bioprinting
  Lutz Kloke, Cellbricks, Germany

## Short talks: Pharmaceutical manufacturing and engineering / Continuous manufacturing

- 15:00 Quantification of free/loaded drug fractions and release kinetics from colloidal-based formulations Massimiliano Pio di Cagno, University of Oslo, Norway
- 15:10 Fibroin-based microspheres in periodontal bone-ligament-cementum regeneration

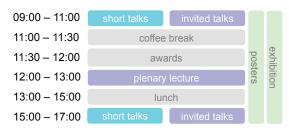
  Marco Ruggeri, University of Pavia, Italy
- 15:20 On the Role of Internal Gradients and
  Stochastic Nucleation in Pharmaceutical
  Freezing and Freeze-drying
  Andraz Kosir, ETH Zürich, Switzerland
- 15:30 Electrostatic spray drying: alternative technology for bioactive compounds powder Elodie Beaupeux, Fluid Air, France

- 15:40 In-vial detection of protein denaturation using intrinsic fluorescence anisotropy
  Khaled Elkassas, University College Cork, Ireland
- 15:50 Development of long-acting injectable nanosuspension by continuous bottom-up crystallization and diafiltration process Snehashis Nandi, Janssen R&D a devision of Johnson & Johnson, Belgium
- 16:00 Continuous Manufacturing: Rheological Powder Characterisation of Excipients to understand their Behaving during the Feeding Step Vanessa Havenith, SE Tylose, Germany
- 16:10 Proof-of-concept: Control strategy for a semicontinuous fluidized-bed granulation process Yasmin Suessenbach, Bayer, Germany
- 16:20 Role of polymer type and bile salts for sustained supersaturation of glibenclamide amorphous solid dispersions in biorelevant media Vladimir Petkov, University of Sofia, Bulgaria
- 16:30 Influence of water on co-amorphous systems with prilocaine as a coformer Xiaoyue Xu, University of Copenhagen, Denmark
- 16:40 Development of Tristearin-based Formulations for Hot-Melt Coating: Effect of Additives on Polymorphic Transitions monitored by Raman Spectroscopy and Atomic Force Microscopy Van-Trung-Tin Huynh, IMT Mines Albi, France
- 16:50 Damaging Influences on Coated Pellets in Feeding and Compaction on Tableting Machines Jan Henrik Finke, TU Braunschweig, Germany
- 17:00 Welcome reception

2D/3D printing
Microbioma and drug delivery
Bioavailability, absorption enhancement and in-vitro
in-vivo correlations
Packaging
Technical innovations
Protein formulations
Advanced drug delivery systems
Oral delivery
Pulmonary delivery
Buccal, nasal and ocular delivery
Topial and transdermal delivery

19:00 End of first conference day

#### Tuesday, 21 March 2023



#### Invited talks: In-silico simulations

09:00 In-silico simulations from a regulatory perspective Giulio Vistoli, University of Milan, Italy

- 09:40 Modeling and simulation in support of drug product development
  Nikoletta Fotaki, University of Bath, United Kingdom
- 10:20 Using Digital Twins to create a virtual world to optimize designs, processes, equipment and operations

  Andrew Whytock, Siemens, Germany

#### Invited talks: Advanced drug delivery / Oral delivery

- 09:00 Hyaluronic Acid Nanogel for Protein Delivery
  System and Vaccine Application
  Shogo Aso, Asahi Kasei Corporation, Fuji, Japan
- 09:10 PLGA microparticles: impact of the type of drug on single microparticle behavior
  Lise-Anne Lefol, University of Lille, France
- 09:20 Dry powders for nasal administration of hyperimmune serum against SARS-CoV-2 Annalisa Bianchera, University of Parma, Italy
- 09:30 Optimization of a method for analyzing the behavior of rapidly dissolving films in contact with water

  Mathieu Reuther, Adhexpharma, Chenove, France
- 09:40 Delivering biopharmaceuticals via buccal mucosa with an octopus-inspired suction patch David Klein Cerrejon, ETH Zurich, Switzerland
- 09:50 Design and development of chewable softgel capsules using a QbD approach Fanny Quemeneur, NextPharma, Ploermel, France
- 10:10 Compression-coated tablet for the determination of gastric water emptying: development and in vivo validation Theodora Tzakri, University of Greifswald, Germany
- 10:20 The trouble with polymorphism of oral lipid formulations: can we control it with crystal modifiers?

  Serena Bertoni, University of Bologna, Italy
- 10:30 Enzymatic drug degradation in the fasted and fed small intestineZahari Vinarov, University of Sofia, Bulgaria
- 10:40 Evaluation of the effect of process and formulation on Catalase tablets
  Ruben Martins Fraga, RCPE Research Center Pharmaceutical Engineering, Graz, Austria
- 10:50 In situ follow-up of pharmaceutical tablet dissolution by SR-μCT Danilo Rosa Nunes, Novitom, Grenoble, France
- 11:00 Coffee/exhibition/posters

#### Plenary lecture

12:00 The role of liposomes in clinical nanomedicine developmentGert Storm, University of Utrecht, The Netherlands

#### 13:00 Lunch/exhibition/posters

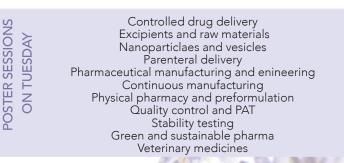
#### Invited talks: Personalised medicines

- 15:00 Patient-individualized drug releasing implants in Otorhinolaryngology
  Verena Scheper, Hannover Medical School,
  Germany
- 15:40 Economic impact of personalised medicine: the case of predictive biomarkers in immunotherapy Valentina Orlando, University of Naples Federico II, Italy
- 15:50 Impact of Coatings on Pellet dispensability in an innovative Drug Dosage Manager
   Laura Sophie Steinecker, Tiefenbacher Group,
   Hamburg, Germany
- 16:00 Spectroscopic investigation of the ink distribution after inkjet printing onto the personalized porous substrates Ilari Ahola, University of Copenhagen, Denmark
- 16:10 Novel 3D printed PCL and inulin-g-P(D,L) LA macroporous scaffolds for bone tissue engineering Carmela Tommasino, University of Salerno, Italy
- 16:20 Novel biodegradable subcutaneous implants manufactured via high-resolution 3D-printing Bianca Brandl, RCPE - Research Center Pharmaceutical Engineering, Austria
- 16:30 Preliminary safety assessment of intravesical drug delivery systems prepared by 4D printing Marco Uboldi, Univeristy of Milan, Italy
- 16:40 3D printed flavour-rich chewable paediatric tablets fabricated using micro-extrusion for point of care applications Dennis Douroumis, University of Greenwich, United Kingdom
- 16:50 3D printed capsules for colonic delivery of bacterial suspension Marina Green Buzhor, ETH Zurich, Switzerland

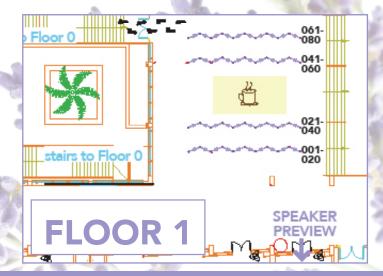
### Short talks: Bioavailability / Topical and transdermal delivery / Technical innovations

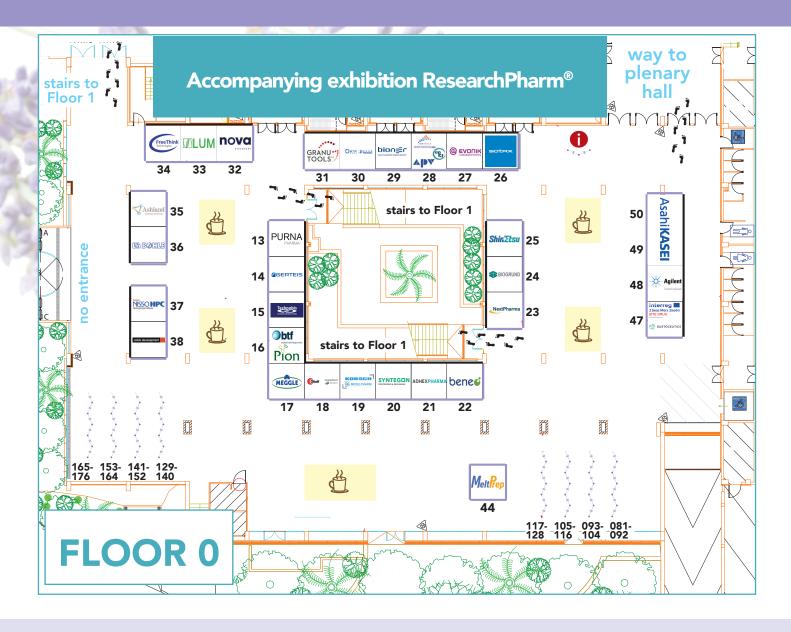
- 15:00 Enhancing the oral absorption of bevacizumab with a combined strategy based on sodium deoxycholate and albumin-based nanoparticles Cristina Pangua, University of Navarra, Spain
- 15:10 Acidic Drugs Intestinal Solubility Correlation Fasted and Fed in vitro vs ex vivo Gavin Halbert, University of Strathclyde, Glasgow, United Kingdom
- 15:20 Effect of lipid molecular structure on aggregate formation and drug solubilization in simulated intestinal fluids
  Liliya Vinarova, University of Sofia, Bulgaria
- 15:30 In situ gelling powders for skin repairing: alginate/pectin/chitosan with sodium hyaluronate as a potential wound dressing Chiara Amante, University of Salerno, Italy

- 15:40 Liposomes-nanofibers composite system with simvastatin for chronic wounds therapy Luca Casula, University of Cagliari, Italy
- 15:50 An assessment of the potential use of a 1cm2 hydrogel-forming microneedle patch for the weekly treatment of osteoporosis
  Anastasia Ripolin, Queen's University of Belfast, United Kingdom
- 16:00 Dissolvable Bilayer Microneedles Produced by Combining Inkjet Printing and Micromolding Lukas Lammerding, University of Dusseldorf, Germany
- 16:10 What level of structural similarity is necessary to demonstrate equivalence of semisolid drug products? Umberto Musazzi, University of Milan, Italy
- 16:20 Bioinspired, low-cost device for minimally invasive blood sampling Nicole Zoratto, ETH Zurich, Switzerland
- 16:30 Oral cell culture in flow using a Lab-on-a-Disc platform to study pathogenic interactions in periodontitis Juliane Fjelrad Christfort, University of Cote dAzur, France
- 16:40 How to improve long-term storage of therapeutic cells? Impact of cell encapsulation on survival during cryopreservation Natalia Ortiz-Silva, University of Paris-Saclay, France
- 16:50 Microfluidic production of nanogels as alternative triple transfection reagents for the manufacture of adeno-associated virus vectors Zoe Whiteley, University College London, United Kingdom



#### 17:00 End of conference





### MANY THANKS TO OUR SPONSORS























#### Venue

#### Marseille Chanot

Exhibition and convention centre Palais des Congrés 114 Rond-Point du Prado 13008 Marseille

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