PBP

WORLD MEETING

in combination with

ResearchPharm®

International Exhibition for R&D

13th World Meeting on Pharmaceutics, Biopharmaceutics and Pharmaceutical Technology

Rotterdam

The Netherlands, 28 - 31 March 2022

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PBP WORLD MEETING

13TH WORLD MEETING ON PHARMACEUTICS, BIOPHARMACEUTICS AND PHARMACEUTICAL TECHNOLOGY

4 parallel symposia on basic research, research & development, industrial practice and analytics

ROTTERDAM, THE NETHERLANDS
28 - 31 MARCH 2022

INDEX

General information

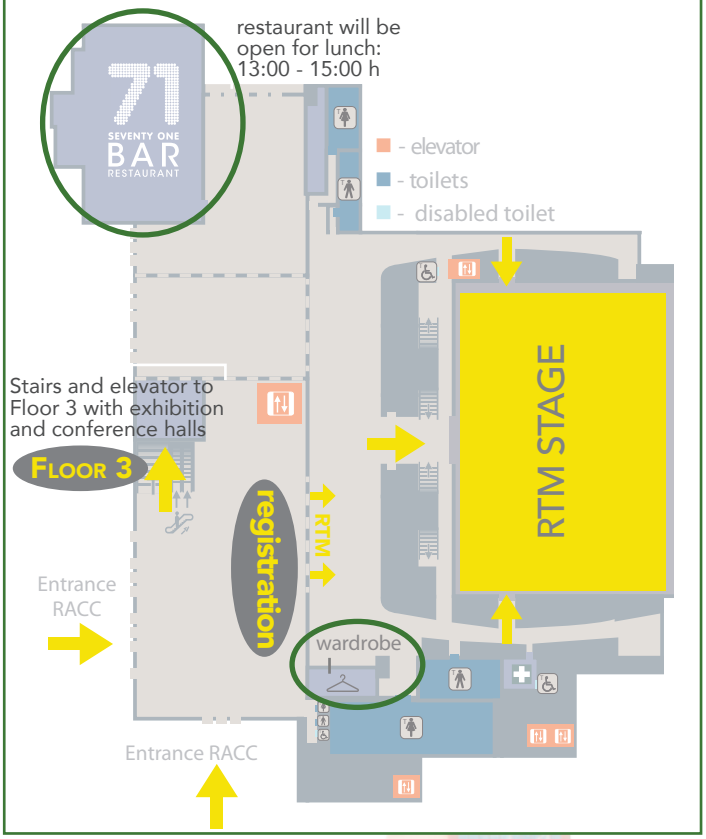
Organisers

A.D.R.I.T.E.L.F
Italian Association of Pharmaceutical Technology and Law
Piazzale Aldo Moro
00185 Roma, Italy

APGI
International Society of Drug Delivery Sciences and Technology
3, rue de Professeur Laguesse
59000 Lille, France

APV
International Association for Pharmaceutical Technology
Kurfürstenstraße 59
55118 Mainz, Germany

Site map ground floor



Wifi access

WiFi kindly sponsored by

BIOGRUND
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WiFi-name BIOGRUND

Public transport METRO E D

Opening hours

business office and registration desk

Monday	28 March 2022	10:00 - 19:00 h
Tuesday	29 March 2022	08:00 - 18:00 h
Wednesday	30 March 2022	08:00 - 17:00 h
Thursday	31 March 2022	08:00 - 17:00 h

Social programme

Welcome reception

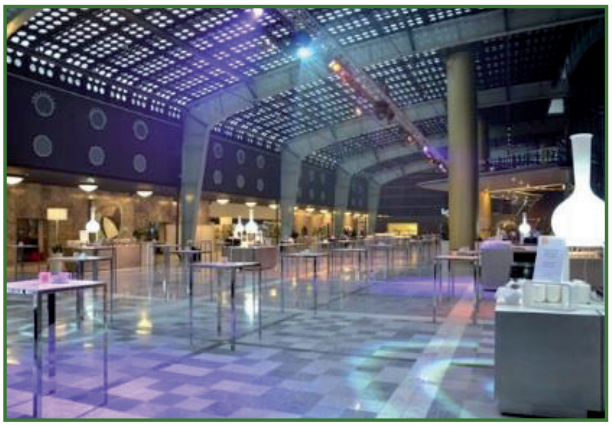
The welcome reception will be held on
Monday, 28 March 2022 from 17:30 - 19:00 h.
Enjoy a glass of wine while networking with old and new friends or strolling around the industrial exhibition ResearchPharm® at the congress centre.

Networking event

Join us for our unmissable social networking event at the modern event location „Postillion Hotel & Convention Centre World Trade Centre Rotterdam (WTC)".

The doors will be open for you
from 19:45 h on Wednesday, 30 March 2022!

The WTC Rotterdam is reachable within walking distance in the city centre of Rotterdam.



Experience Rotterdam on a traditional exclusive level and establish contacts in a relaxed atmosphere. Taste the variety of traditional Dutch food with a traditional buffet until 23:00 h.

Public transport

The WTC is located in the city centre of Rotterdam. The best way to reach it is by walking or using metro line D or E. Two metro stations (Stadhuis and Beurs) are both within short walking distance.

Postillion Hotel & Convention Centre World Trade Centre Rotterdam (WTC) | Beursplein 37 | 3011 AA Rotterdam | The Netherlands

Chairs and committees

Local chair of the conference

Raymond M. Schiffelers, University Medical Center, Utrecht, The Netherlands

Co-chairs of the conference

Joerg Breitkreutz, University of Düsseldorf, Germany
Paolo Caliceti, University of Padova, Italy
Juergen Siepmann, University of Lille, France

Chair of the programme committee

Geert Verreck, Janssen, Beerse, Belgium

Programme committee members

Hans-Georg Eckert, Valicare, Frankfurt/Main, Germany
Elias Fattal, University Paris-Saclay, Paris, France
Massimo Fresta, University Magna Graecia, Catanzaro, Italy
Marco Gentile, formerly Dompé farmaceutici, Milan, Italy
Maria-Teresa Peracchia, Sanofi, Vitry sur Seine, France

International Advisory Board

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Jan Saevels, BSPS (Belgian Society of Pharmaceutical Sciences), Belgium
Helmut Viernstein, ÖPhG (Austrian Pharmaceutical Society), Austria
Frédéric Zwahlen, GSIA, Switzerland

Scientific programme

Monday, 28 March 2022

RTM Stage

Opening ceremony

13:00 - 13:45
Raymond M. Schiffelers, University Medical Center, Utrecht, The Netherlands
Jörg Breitkreutz, University of Düsseldorf, Germany
Paolo Caliceti, University of Padova, Italy
Juergen Siepmann, University of Lille, France

Key note lecture

Chair: Raymond M. Schiffelers, University Medical Center, Utrecht, The Netherlands

13:45 - 14:45
From drug delivery to drug discovery – Going backward on 25 years of pharmaceutical research
Jean-Christophe Leroux, ETH Zurich, Switzerland

14:45 - 15:30
Coffee break
Industrial exhibition ResearchPharm®

ResearchPharm® International Exhibition for R&D

Hot topic session

Chairs: Paolo Caliceti, University of Padova, Italy, Jörg Breitkreutz, University of Düsseldorf, Germany and Juergen Siepmann, University of Lille, France

15:30 - 16:10
Small RNA delivery at clinical stage
Roel Schaapveld, InteRNA, Nijmegen, The Netherlands

16:10 - 16:50
Formulation approaches of RNA vaccines and drugs
Andreas Zimmer, University of Graz, Austria

16:50 - 17:30
Digital health and 3D printing of medicines
Abdul Basit, University College London, London, United Kingdom

Welcome reception

17:30 - 19:00
Enjoy the evening with a glass of wine while discovering the exhibtion area

ResearchPharm® International Exhibition for R&D

Tuesday, 29 March 2022

Invited talks — Adjuvants and excipients for vaccine formulations

Chairs: Andreas Zimmer, University of Graz, Austria and Raymond M. Schiffelers, University Medical Center, The Netherlands

09:00 - 09:40 **Designing and building the next generation of vaccine adjuvants**
Derek O'Hagan, GlaxoSmithKline, United States

09:40 - 10:20 **Formulation aspects: polymers**
Francesca Mastrotto, University of Padova, Italy

10:20 - 11:00 **COVID vaccines: strategies for accerleration of drug product development**
Carmen Arigita, Janssen Pharmaceuticals a division of J&J, Leiden, The Netherlands

11:00 - 11:30 **Coffee break**
Poster session and industrial exhibition ResearchPharm®

11:30 - 12:00 APV award session

Chair: Jörg Breitkreutz, University of Düsseldorf, Germany

Plenary lecture

Chair: Jörg Breitkreutz, University of Düsseldorf, Germany

12:00 - 13:00 **Accelerated and cost-effective biosimilar introduction with an innovative manufacturing process and lean non-clinical and clinical development**
Jaap Wieling, Biosana Pharma, Leiden, The Netherlands

13:00 -15:00 **Lunch break - cash points at the exhibition area / restaurant (ground floor)**
Poster session and industrial exhibition ResearchPharm®

Invited talks — Poorly soluble drugs

Chairs: Jenifer Mains, NextPharma, United Kingdom and Anette Müllertz, Bioneer, Denmark

15:00 - 15:40 **Formulating poorly soluble drugs - the general and the specific**
Korbinian Löbmann, Zerion Pharma, Copenhagen, Denmark

15:40 - 16:20 **In vitro dissolution conditions**
René Holm, University of Southern Denmark, Odense, Denmark

16:20 - 17:00 **New development strategies for oral application of nanomilled drugs**
Elisabeth Kersten, Bayer, Wuppertal, Germany

Invited talks — Engineering and robotics

Chairs: Thomas Brinz, Syntegon, Germany and Markus Thommes, University of Dortmund, Germany

09:00 - 09:40 **Digitalisation of pharmaceutical processes**
Rok Sibanc, Bayer, Wuppertal, Germany

09:40 - 10:20 **Lab automation and robotics**
Patrick Courtney, leader EU Working Group on Analytical Laboratory Robotics, Switzerland

10:20 - 11:00 **Quality assurance in vaccine manufacturing**
Christoph Peter, BioNTech, Mainz, Germany

Invited talks — Oligonucleotide delivery

Chairs: Stefaan DeSmedt, University of Ghent, Belgium and Claus-Michael Lehr, University of Saarbrücken, Germany

15:00 - 15:40 **Lipid and dendrimer-based nanomedicine for nucleic acid delivery**
Elias Fattal, University of Paris-Saclay, France

RTM Stage

Port 1AB

Port 1AB

15:40 - 16:20 **Spray-drying siRNA-loaded LNPs for inhalation and improved storage and transport conditions**
Olivia Merkel, University of Munich, Germany

16:20 - 17:00 **Natural vs. synthetic lipid nanoparticles for the delivery of RNA**
Raymond M. Schiffelers, University Medical Center, Utrecht, The Netherlands

Rotterdam BC

Short talks Oral delivery

Chairs: Renata Jachowitz, University of Krakow, Poland and Joao Pinto, University of Lisbon, Portugal

09:00 - 09:20 **Poly(2-alkyl-2-oxazoline) as a polymer platform for highly drug-loaded sustained release tablets**
Aseel Samaro, University of Ghent, Belgium

09:20 - 09:40 **Feasibility of nanocellulose/ pectin/ alginate composite hydrogels crosslinked with Ca2+ and citric acid as a superabsorbent material**
Pichapar O-chongpian, University of Chiang Mai, Thailand

09:40 - 10:00 **Regional bile salt and lipid concentrations in the rat small intestine: a comparison between the lumen and the mucus layer**
Mette Klitgaard, University of Copenhagen, Denmark

10:00 - 10:20 **In-vitro reproduction of the small intestine considering essential intestinal components**
Scarlett Zeiringer, University of Graz, Austria

10:20 - 10:40 **Processing of lipid nanodispersions into solid formulations by spray drying**
Denise Steiner, University of Braunschweig, Germany

10:40 - 11:00 **Tableted freeze-dried siRNA-lipoplexes – Evaluation of the stability in gastro-intestinal environment**
Asad Ur Rehman, University of Paris, France

Short talks Pharmaceutical manufacturing and engineering

Chairs: Ruggero Bettini, University of Parma, Italy and Robin Meier, L.B. Bohle, Germany

15:00 - 15:20 **Compaction properties of dry granulated particles prepared from microcrystalline cellulose and lactose powder particles**
Maryam Tofiq, Uppsala University, Sweden

15:20 - 15:40 **Unraveling the role of the solvent during spray drying of amorphous solid disperions of fenofibrate**
Sien Dedroog, University of Leuven, Belgium

15:40 - 16:00 **Oral solid dosage formulation of API - ionic liquids via spray drying**
Evangelia Tsolaki, University College Dublin, Ireland

16:00 - 16:20 **Model development for die filling of different formulations on rotary presses**
Ann Kathrin Schomberg, University of Braunschweig, Germany

16:20 - 16:40 **Lamination of pharmaceutical tablets: classification and influence of process parameters**
Vincent Mazel, University of Bordeaux, France

16:40 - 17:00 **Frozen Quality by Design: Towards rational design of pharmaceutical freezing processes in vials at production scale**
Leif-Thore Deck, ETH Zurich, Switzerland

Port 1C

Short talks Dermal and transdermal delivery

Chairs: Anna-Maria Fadda, University of Cagliari, Italy and Ryan F. Donnelly, Queen's University Belfast, United Kingdom

09:00 - 09:20 **Microparticles loaded dissolving microneedle patches for localised and sustained intradermal delivery of amphotericin B**
Ke Peng, Queen's University Belfast, United Kingdom

09:20 - 09:40 **3D-printed human hair follicle model to investigate topically administered nano-antibiotics**
Samy Aliyazdi, University of Saarbrücken, Germany

09:40 - 10:00 **Novel bilayer microarray patch (MAP) assisted long acting intradermal delivery for HIV pre-exposure prophylaxis**
Lalitkumar K. Vora, Queen's University Belfast, United Kingdom

10:00 - 10:20 **Confocal Raman microscopy for the investigation of drug delivery into biofilms depending on maturation and bacterial composition**
Pia Kaiser, Goethe University, Frankfurt, Germany

10:20 - 10:40 **Transdermal delivery of cyclodextrin complexed olanzapine via hydrogel forming microneedle arrays**
Peter E. McKenna, Queen's University Belfast, United Kingdom

10:40 - 11:00 **Skin microbiota: set up of a protocol to evaluate a correlation between the microbial flora and skin parameters**
Paola Perugini, University of Pavia, Italy

Short talks Advanced drug delivery systems

Chairs: Stephan Reichl, University of Braunschweig, Germany and Joel Richard, MedinCell, France

15:00 - 15:20 **Chitosan based nanoparticles containing saffron extract for ocular administration of crocin**
Ylenia Zambito, University of Pisa, Italy

15:20 - 15:40 **Contact lenses for ocular administration of statins: Design and in vitro, ex vivo and in vivo evaluation**
Carmen Alvarez-Lorenzo, University of Santiago de Compostela, Spain

15:40 - 16:00 **Novel soluble mesoporous dialdehyde cellulose beads for improving the solubility and supersaturation of poorly water-soluble drugs**
Fan Xie, University of Leuven, Belgium

16:00 - 16:20 **Pericardial delivery of therapeutics via thermosensitive hydrogel for cardiac regeneration**
Cristina Casadidio, University of Utrecht, The Netherlands

16:20 - 16:40 **Near-infrared light-responsive injectable hydrogel containing bismuth nanoparticles for cancer photo-chemo-immunotherapy**
Mohammad-Ali Shahbazi, University Medical Centre Gronigen, The Netherlands

16:40 - 17:00 **Microfluidic production of protein-lipid nanoaggregates to boost T-cell activation**
Michele Schlich, University of Cagliari, Italy

17:00 - 18:00 **Students meets industry meeting**
Chair: Sandra Klein, University of Greifswald, Germany

Port 1C

Wednesday, 30 March 2022

RTM Stage

Invited talks — Oral delivery of novel modalities
Chairs: Duncan Craig, University College London, United Kingdom and Jennifer Dressman, University of Frankfurt, Germany (tbc)

09:00 - 09:40 **Nanoformulations for oral delivery: process point of view**
Stéphanie Briançon, University of Lyon, France

09:40 - 10:20 **BIONDDTM: capsule for oral delivery of biologics**
Karsten Lindhardt, Biograil, Hedehusene, Denmark

10:20 - 11:00 **Modulation of tight junction properties for the oral delivery of biologics**
Alistair Taverner, University of Bath, United Kingdom

11:00 - 11:30 **Coffee break**
Poster session and industrial exhibition ResearchPharm®

11:30 - 12:00 ADRITELF award session
Chair: Paolo Caliceti, University of Padova, Italy

Plenary lecture
Chair: Paolo Caliceti, University of Padova, Italy

12:00 - 13:00 **Extracellular vesicles: boosting clinical translation of nanomedicine**
Paolo Ciana, University of Milan, Italy

13:00 -15:00 **Lunch break - cash points at the exhibition area / restaurant (ground floor)**
Poster session and industrial exhibition ResearchPharm®

Invited talks — Continuous manufacturing
Chairs: Johannes Khinast, Graz University of Technology, Austria and Peter Kleinebudde, University of Düsseldorf, Germany

15:00 - 15:40 **QbCon 1: a new continuous manufacturing concept**
Robin Meier, L.B. Bohle, Ennigerloh, Germany

15:40 - 16:20 **J&J experience: continuous manufacturing from equipment qualification to regulatory submission**
Alessandro Cassetti and Domenico Annese, Janssen Pharmaceuticals a division of J&J, Latina, Italy

16:20 - 17:00 **Early drug product development approaches for continuous manufacturing**
Valérie Vanhoorne, University of Ghent, Belgium

Port 1AB

Short talks — Nanoparticles 1
Chairs: Ben Boyed, University of Copenhagen, Denmark and Gert Fricker, University of Heidelberg, Germany

09:00 - 09:20 **Development of innovative grafted lipoplexes using PNVP derivatives polymers as a PEG alternative to treat cancer**
Manon Berger, University of Liège, Belgium

09:20 - 09:40 **Glabrescione B-loaded liposomes for medulloblastoma treatment: a formulative study**
Raffaella Daniele, University of Padova, Italy

09:40 - 10:00 **In vitro and in vivo anti-tumoral evaluation of co-encapsulated fisetin and cisplatin into liposomes**
Karine Andrieux, University of Paris, France

10:00 - 10:20 **Lyotropic liquid crystal drug delivery system: cubosomes encapsulate cromolyn sodium for oral delivery**
Linh Dinh, Yonsei University, Republic of Korea

10:20 - 10:40 **New nanoparticle formulation for cyclosporin A: in vitro assessment**
Amandine Gendron, University of Paris-Saclay, France

10:40 - 11:00 **Ionic liquids as solubilizing agents and stabilizers, for antimicrobial eye drops containing diacerein**
Brunella Grassiri, University of Pisa, Italy

Short talks — Nanoparticles 2

Chairs: Guiseppe de Rosa, University of Naples, Italy and Simona Mura, University of Paris-Saclay, France

15:00 - 15:20 **Immunomodulatory nanoparticles for sepsis treatment**
Younes Louaguenouni, University of Paris-Saclay, France

15:20 - 15:40 **Development and optimization of a new nanocarrier system for lipophilic drugs: human serum albumin nanocapsules with a triglyceride core**
Sarah Hester, University of Münster, Germany

15:40 - 16:00 **Rational design and microfluidic transposition of Lipid Nanocapsules for the encapsulation of poorly water-soluble molecules**
Kevin Matha, Helmholtz Institute for Pharmaceutical Research, Saarbrücken, Germany

16:00 - 16:20 **Anticancer Thermo-Sensitive Polymer Prodrug Nanoparticles Prepared by an All-Water Nanoprecipitation Process**
Léa Guerassimoff, University of Paris-Saclay, France

16:20 - 16:40 **Strategies to decorate polymeric nanoparticles with NGR peptides to target cancer cells**
Claudia Conte, University of Naples Federico II, Italy

16:40 - 17:00 **Silk fibroin nanoparticles to redirect immunity against different cancers: proof of concept in a murine model**
Elia Bari, Amedeo Avogadro University of Eastern Piedmont, Italy

Short talks — Drug printing

Chair: Abdul Basit, University College London, United Kingdom and Dimitris Fatouros, University of Thessaloniki, Greece

09:00 - 09:20 **3D Printed fenofibrate tablets using direct powder printing**
Maria Ines Barreiros, University of Nottingham, United Kingdom

09:20 - 09:40 **Production of personalized medicines within seconds with volumetric 3D printing**
Alvaro Goyanes Goyanes, University of Santiago de Compostela, Spain

09:40 - 10:00 **Semi-solid extrusion 3D-printing for the manufacture of HPMC based fast disintegratin**
Pattaraporn Panraksa, Chiang Mai University, Thailand

10:00 - 10:20 **Pre-crosslinked alginate hydrogels: physico-chemical requirements for high 3D-printing performance**
Giovanni Falcone, University of Salerno, Italy

10:20 - 10:40 **Cocrystal formation enables 3D printing of high melting drugs via combined HME and FDM processing**
Marta Kozakiewicz-Latała, University of Wroclaw, Poland

10:40 - 11:00 **Advanced melt drop deposition: a promising technology for additive manufacturing of oral dosage forms**
Thomas Kipping, Merck, Darmstadt, Germany

Invited talks — Local delivery to the ear, eye and lung

Chairs: Anne Seidlitz, University of Düsseldorf, Germany and Regina Scherließ, University of Kiel, Germany

15:00 - 15:40 **Drug delivery to the inner ear and periodontal pocket**
Florence and Juergen Siepmann, University of Lille, France

15:40 - 16:20 **Polymeric micelles for ocular drug delivery**
Sara Nicoli, University of Parma, Italy

16:20 - 17:00 **Repurposing of cationic amphiphiles for the local delivery of RNA therapeutics**
Koen Raemdonck, University of Ghent, Belgium

Invited talks — Protein delivery and biosimilars

Chairs: Wolfgang Frieß, University of Munich, Germany and Jörg Huwyler, University of Basel, Switzerland

09:00 - 09:40 **Challenges for the delivery of fragile molecules: focus on injectable formulations from an industrial perspective**
Joël Richard, MedinCell, Jacou, France

09:40 - 10:20 **Oral delivery of peptides: from permeation enhancers to devices**
David Brayden, University College Dublin, Ireland

10:20 - 11:00 **Microfluidic technology and machine learning approaches for the development of biopharmaceutical products**
Paolo Arosio, ETH Zurich, Switzerland

Short talks — Nucleotide delivery

Chair: Elias Fattal, University of Paris-Sud, France and Olivia Merkel, University of Munich, Germany

15:00 - 15:20 **In vitro and ex vivo delivery of siRNA via VIPER polymer system as a potential treatment for COVID-19**
Domizia Baldassi, University of Munich, Germany

15:20 - 15:40 **Hybrid lipid/polymer nanoparticles to tackle the cystic fibrosis mucus barrier in siRNA delivery to the lungs**
Gemma Conte, University of Campania Luigi Vanvitelli, Caserta, Italy

15:40 - 16:00 **Microfluidic production of plasmid DNA-loaded nanogels for non-viral gene delivery**
Zoe Whiteley, University College London, United Kingdom

16:00 - 16:20 **Dual Loaded Core-Shell mRNA and pDNA Nanocarriers for co-delivery of NA-encoded antigens and adjuvants**
Sarah S. Nasr, Saarland University, Germany

16:20 - 16:40 **Targeted delivery of CRISPR/Cas9 plasmid system for cancer immunotherapy approaches**
Hasan Akbaba, Ege University, Izmir, Turkey

16:40 - 17:00 **Development of lipoplexes with enhanced crossing of cell barriers**
Busra Arpac, University of Padova, Italy

20:00 - 23:00 **Networking event at the WTC**

Thursday, 31 March 2022

Invited talks — Nanoparticles

Chairs: Juan M. Irache, University of Navarra, Spain and Jean-Christophe Leroux, ETH Zurich, Switzerland

09:00 - 09:40 **Novel biohybrid nanomedicines for cancer therapy: from nanoformulation design to the in vivo validation**
Helder Santos, University of Helsinki, Finland

09:40 - 10:20 **Nanomedicine in the treatment of cancer and neurodegenerative diseases is impacted by patient sex**
Avi Schroeder, Technion Israel Institute of Technology, Haifa, Israel

10:20 - 11:00 **Nanomedicines: tracking their fate from site of administration to site of action**
Simona Mura, University of Paris-Saclay, France

11:00 - 11:30 **Coffee break**
Poster session and industrial exhibition ResearchPharm®

ResearchPharm® International Exhibition for R&D

11:30 - 12:00 **APGI award session**
Chairs: Juergen Siepmann, University of Lille, France

Plenary lecture

Chairs: Juergen Siepmann, University of Lille, France

12:00 - 13:00 **Lipids, lipid nanoparticles and Covid-19 mRNA vaccines**
Pieter Cullis, University of British Columbia, Vancouver, Canada

13:00 -15:00 **Lunch break - cash points at the exhibition area / restaurant (ground floor)**
Poster session and industrial exhibition ResearchPharm®

ResearchPharm® International Exhibition for R&D

Invited talks — Controlled drug delivery

Chairs: Florence Siepmann, University of Lille, France and Eva Roblegg, University of Graz, Austria

15:00 - 15:40 **Multicompartment 3D cell-based bioengineered mucosal models in drug delivery**
Bruno Sarmento, University of Porto, Portugal

15:40 - 16:20 **Oral colon delivery of drugs based on intestinal transit time**
Alessandra Maroni, University of Milan, Italy

16:20 - 17:00 **Oral gut-targeted delivery of immunomodulatory proteins and antibodies**
Silvia Matiz, Intract Pharma, London, United Kingdom

Invited talks — 3D printing technologies

Chairs: Alvaro Goyanes, FabRx, United Kingdom and Brigitte Evrard, University of Liege, Belgium

09:00 - 09:40 **The power of 3D-printing of drugs - perspective of patients and healths care professionals**
Elisabeth Ruijgrok, Erasmus MC - Sophia's Childrens Hospital, Rotterdam, The Netherlands

09:40 - 10:20 **New 3D-printed oral dosage forms**
Dimitris Fatouros, Aristotle University, Thessaloniki, Greece

10:20 - 11:00 **Polyprint: 3D printing with a GMP-ready FDM printer**
Simon Geisler, Merck KGaA, Darmstadt and Julian Quodbach, University of Utrecht, The Netherlands

Short talks — Continuous manufacturing and PAT

Chairs: Susanne Page, F. Hoffmann-La Roche, Switzerland and Valérie Vanhoorne, University of Ghent, Belgium

15:00 - 15:20 **Identification of biopharmaceuticals drug substances using non-destructive and non-invasive approach**
Mahendra Kumar Shukla, University of Limerick, Ireland

Port 1AB

15:20 - 15:40 **Inline nanoparticle sizing and process control for nanomedicine manufacturing processes**
Rut Besseling, Inprocess-LSP, Oss, The Netherlands

15:40 - 16:00 **Dry amorphization of itraconazole using continuous twin-screw technology at low temperatures**
Margarethe Richter, ThermoFisher, Germany

16:00 - 16:20 **A novel continuous coating process for pellets**
Anna Pennemann, University of Dortmund, Germany

16:20 - 16:40 **Continuous direct compression: challenges and solutions related to feeding**
Bram Bekaert, University of Ghent, Belgium

16:40 - 17:00 **Inter-tablet porosity variation across large sample size measured by at-line terahertz analysis**
Prince Bawuah, University of Cambridge, United Kingdom

Rotterdam BC

Short talks — Bioavailability and microbioma

Chairs: Werner Weitschies, University of Greifswald, Germany (tbc) and Felipe Varum, F. Hoffmann-La Roche, Switzerland

09:00 - 09:20 **Improving dissolution behavior and oral absorption of weakly basic drugs using ph modifiers: a physiologically realistic mass transport analysis**
Jozef Al-Gousous, University of Michigan, United States

09:20 - 09:40 **Towards the design of mucus-penetrating and permeation enhancer albumin-based nanoparticles for the oral delivery of therapeutic proteins**
Cristina Pangua, University of Navarra, Spain

09:40 - 10:00 **Excipients modulate drug bioavailability, transporter expression, endogenous hormones and nuclear receptors in a sex and concentration dependent manner**
Christine M. Madla, University College London, United Kingdom

10:00 - 10:20 **Fluidized-bed Granulation and Tableting of Living Microorganisms**
Karl Vorländer, University of Braunschweig, Germany

10:20 - 10:40 **Direct compression: increased viability of probiotics and importance of excipients for soft-tableting**
Susanne Florin-Muschert, University of Lille, France

10:40 - 11:00 **Active machine learning for delivery of precision probiotics**
Laura E. McCoubrey, University College London, United Kingdom

Short talks — Bioprinting and protein formulation

Chairs: Christos Gioumouxouzis, University of Thessaloniki, Greece and Jörg Breitkreutz, University of Düsseldorf, Germany

15:00 - 15:20 **In-Vial Direct Dosing and Drying of Biologics by Inkjet Printing**
Daniela Fiedler, Graz University of Technology, Austria

15:20 - 15:40 **Carvacrol-loaded 3D printed PLA scaffolds for antibiofilm performance**
Xián Farto-Vaamonde, University of Santiago de Compostela, Spain

15:40 - 16:00 **A Machine Learning and Machine Vision Pipeline for ODF Development**
Colm O'Reilly, University College London, United Kingdom

16:00 - 16:20 **Protein integrity in highly loaded melt extrudates processed by small scale ram and twin screw extrusion**
Katharina Dauer, University of Bonn, Germany

16:20 - 16:40 **The Viscosity Reduction Platform: Enabling subcutaneous delivery**
Tobias Rosenkranz, Merck KGaA, Germany

16:40 - 17:00 **In-process stabilization of a protein drug by saccharides**
Johanna Dieplinger, Graz University of Technology, Austria

Short talks — Mucosal, nasal and pulmonary delivery

Chairs: Malgorzata Sznitowska, University of Gdansk, Poland and Hervé Hillaireau, University of Paris-Saclay, France

09:00 - 09:20 **Development of an anti-infective formulation platform by plant extract loaded electrospun fibers - translational perspectives for nonsurgical periodontitis therapy**
Viktoria Planz, Goethe University Frankfurt, Germany

09:20 - 09:40 **Open flow microperfusion to evaluate drug penetration in the buccal mucosa**
Laura Wiltschko, Institute for Biomedicine and Health Sciences, Graz, Austria

09:40 - 10:00 **Optimisation of nose-to-brain delivery for patient with or without septum perforation**
Laura Deruyver, University of Bruxelles, Belgium

10:00 - 10:20 **Inflamed model of the human alveolus on a breathing lung-on-chip**
Claus-Michael Lehr, Helmholtz Institute for Pharmaceutical Research, Saarbrücken, Germany

10:20 - 10:40 **Spray-dried pneumococcal membrane vesicles vaccine for pulmonary immunization**
Mina Mehanny, Helmholtz Institute for Pharmaceutical Research, Saarbrücken, Germany

10:40 - 11:00 **Liposomal encapsulation of carbon quantum dots designed to treat coronavirus infections modifies their fate after pulmonary delivery**
Maud Taulen, University of Paris-Saclay, France

Invited talks — Topical formulations and transdermal delivery

Chairs: Piera Di Martino, University of Chieti - Pescara, Italy and Dominique Lunter, University of Tübingen, Germany

15:00 - 15:40 **Topical formulation development - the application of confocal raman spectroscopy**
Majella Lane, University College London, United Kingdom

15:40 - 16:20 **Dermal/transdermal delivery by nanocarriers: formulation in a regulatory perspective**
Carlotta Marianecci, Sapienza University of Rome, Italy

16:20 - 17:00 **Strategies for wound healing**
Maike Windbergs, Goethe University Frankfurt, Germany

End of the conference

Our presidents and Invited speakers

A.D.R.I.T.E.L.F.
Paolo Caliceti

APGI
Juergen Siepmann

APV
Joerg Breitzkreutz

Domenico Annese, Janssen Pharmaceuticals a division of J&J, Latina, Italy

Carmen Arigita, Janssen Pharmaceuticals a division of J&J, Leiden, The Netherlands

Paolo Arosio, ETH Zurich, Switzerland

Abdul Basit, University College London, London, United Kingdom

David Brayden, University College Dublin, Ireland

Stéphanie Briançon, University of Lyon, France

Alessandro Cassetti, Janssen Pharmaceuticals a division of J&J, Latina, Italy

Paolo Ciana, University of Milan, Italy

Patrick Courtney, leader EU Working Group on Analytical Laboratory Robotics, Switzerland

Pieter Cullis, University of British Columbia, Vancouver, Canada

Dimitris Fatouros, University of Thessaloniki, Greece

Elias Fattal, University Paris-Saclay, Paris, France

Simon Geisler, Merck KGaA, Darmstadt

René Holm, University of Southern Denmark, Odense, Denmark

Elisabeth Kersten, Bayer, Wuppertal, Germany

Majella Lane, University College London, United Kingdom

Jean-Christophe Leroux, ETH Zurich, Switzerland

Karsten Lindhardt, Biograil, Hedehusene, Denmark

Korbinian Löbmann, Zerion Pharma, Copenhagen, Denmark

Carlotta Marianecci, Sapienza University of Rome, Italy

Alessandra Maroni, University of Milan, Italy

Francesca Mastrotto, University of Padova, Italy

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Robin Meier, L.B. Bohle, Ennigerloh, Germany

Olivia Merkel, University, of Munich, Germany

Simona Mura, University of Paris-Saclay, France

Sara Nicoli, University of Parma, Italy

Derek O'Hagan, GlaxoSmithKline, United States

Christoph Peter, BioNTech, Mainz, Germany

Julian Quodbach, University of Utrecht, The Netherlands

Koen Raemdonck, University of Ghent, Belgium

Joël Richard, MedinCell, Jacou, France

Elisabeth Ruijgrok, Erasmus MC - Sophia's Childrens Hospital, Rotterdam, The Netherlands

Helder Santos, University of Helsinki, Finland

Bruno Sarmento, University of Porto, Portugal

Roel Schaapveld, InteRNA, Nijmegen, The Netherlands

Raymond M. Schiffelers, University Medical Center, Utrecht, The Netherlands

Avi Schroeder, Technion Israel Institute of Technology, Haifa, Israel

Rok Sibanc, Bayer, Wuppertal, Germany

Florence Siepmann, University of Lille, France

Juergen Siepmann, University of Lille, France

Alistair Taverner, University of Bath, United Kingdom

Valérie Vanhoorne, University of Ghent, Belgium

Jaap Wieling, Biosana Pharma, Leiden, The Netherlands

Maike Windbergs, Goethe University Frankfurt, Germany

Andreas Zimmer, University of Graz, Austria

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Many thanks for your participation at this international conference.

Poster session on Tuesday, 29 March 2022

Continuously exhibited from 09:00 to 17:00 h, with special presentations by authors from 11:00 to 11:30 h and 13:00 to 15:00 h. The number indicates the poster panel number.

Bioavailability and absorption enhancement/Microbioma

01. A comparative study of hydrophobic and hydrophilic lubricants for optimal combination of galenical and dissolution properties
G. Birk, E. Peiter, D. J. Price and B. Michel

02. Boost of solubility and supersaturation of celecoxib via synergistic interactions of Eudragit L and HPC SSL in ternary amorphous solid dispersions
F. Pöstges, E. Stoyanov and K. G. Wagner

03. Cannabidiol tablets with an enhanced bioavailability: Optimal selection of excipients and tableting through Design of Experiments
N. Koch, O. Jennotte, A. Lechanteur and B. Evrard

04. Co-milling: effect on dissolution and surface properties of poorly water-soluble drugs
M. Slámová Lojková, J. Beránek, J. Patera and P. Zámostný

05. Effect of Polyols on Caco-2 Transport of Low-Permeability Drugs
D. Truffin, O. Häusler, M. Ramnath, M. Martin, S. Cotier and J. Laparre

06. Enhanced bioavailability of Compound 1c by formulation development
D. Plano, N. de Bruin, R. Gurke, J. Dressman, R. Krieg, I. Berneburg, S. Rahlfs and J. Geyer

07. Enhancing Bioavailability of Poorly Water-Soluble APIs Using Silica-based Drug Delivery
J. Quadflieg, C. Shah and G. Van Essche

08. In-silico design of ternary ASDs containing hydroxypropyl cellulose
C. Luebbert, E. Stoyanov and G. Sadowski

09. Influence of phase separation on the dissolution of amorphous solid dispersions
A. Krummnow, A. Danzer, K. Voges, S. Kyerematen, M. Degenhardt and G. Sadowski

10. Machine Learning Uncovers Adverse Drug Effects on Intestinal Bacteria
L. E. McCoubrey, M. Elbadawi, A. W. Basit, M. Orlu and S. Gaisford

11. Pomalidomide nanosuspension as a neuroprotective strategy for the treatment of Parkinson's disease
L. Casula, M. C. Cardia, A. R. Carta, F. Palmas, D. Valenti, C. Sinico, R. Pireddu, M. Schlich and F. Lai

12. Synergistic Antimicrobial Interactions of Nisin A, with Biopolymers & Solubilisers for Oral Drug Delivery
J. Flynn and S. Hudson

13. The Interplay of Two Poorly Soluble Drugs in ASD Combination Products
M. Kokott, S. Klinken, J. Breitkreutz and R. Wiedey

14. To Study the Robustness of the Sample Preparation of a Standardized pH-Stat Titration Method for Determination of In Vitro Digestion Profiles of a Self-Emulsifying Lipid Based Clotrimazol Formulation
A. Bernaerts

15. Zein nanoparticles as an oral vehicle for quercetin: characterization and in vivo evaluation
R. Campión, A. L. Martínez-López, C. J. González-Navarro, E. de Paz-Barragán, C. Matías-Sainz and J. M. Irache

Buccal and nasal delivery

16. 3D printed hollow microneedles for the buccal delivery of macromolecules
P. K. Monou, E. G. Andriotis, K. Tsongas, O. L. Katsamenis, D. Tzetzis, D. A. Andreadis and D. G. Fatouros

17. A lidocaine-loaded liquid crystal precursor mucoadhesive system for topical anesthesia in the oral cavity
G. Calixto, A. Pestana, J. Araújo and M. Franz-Montan

18. A thermosensitive nasal hydrogel: A new approach for dimethyl fumarate delivery in Pediatrics
N. Nieto González, P. Giunchedi, E. Gavini and G. Rassu

19. Development of nasal liquid formulation of monovalent hMPV live attenuated vaccine candidate: stability assessment and formulation study
V. Tingaud, C. Bordes, P. Lawton, J. Dubois, C. Chupin, M. Rosa-Calatrava and E. Al mouazen

20. Evaluation of the deposition of an in situ hydrogel containing diazepam loaded nanostructured lipid carriers (NLC) in a 3D nasal cavity model
C. Pina Costa, L. Nižić Nodilo, D. Zadravec, L. Kalogjera, J. N. Moreira, J. M. Sousa Lobo, A. Hafner and A. C. Silva

21. Influencing factors on sensory effects caused by nasal powders detected with the slug mucosal irritation assay
M. Trenkel and R. Scherließ

22. Mucoadhesive thermosensitive gels for clonazepam nasal delivery. Part 1: preliminary studies by DoE
M. Cirri, F. Maestrelli, G. Nerli, N. Mennini and P. A. Mura

23. Mucoadhesive Thermosensitive Gels for Clonazepam Nasal Delivery. Part 2: drug release, cytotoxicity and permeability studies
G. Nerli, M. Cirri, F. Maestrelli, N. Mennini, M. D'Ambrosio, C. Luceri and P. Mura

24. Nasal-PAMPA: a novel in vitro tool for the prediction of intranasal drug permeability and its application to formulations of a poorly-soluble drug
P. Henriques, J. Bicker, S. Doktorovová and A. Fortuna

25. Preparation and characterization of API loaded chitosan hydrogels for nasal formulation to reduce the risk of COVID-19 viral infection
B. Vörös-Horváth, P. Živković, G. Bálint, S. Pál and A. Széchenyi

26. Small particles in nasal powders – does a change in application angle influence nasal deposition?
A. Jüptner and R. Scherließ

Cellular drug transport

27. Establishment of a new nasal absorption model for drug delivery testing based on a novel cell line
S. Bendas, K. Nehlsen, T. May and S. Reichl

28. In vitro corneal dry eye model – stability and wound healing effects of allogeneic serum
S. Voß and S. Reichl

29. Interactions between the pharmaceutical formulations and azole resistant Candida spp. observed via "on cell" NMR spectroscopy
K. Malec, A. Mikołajczyk, K. Włodarczyk, U. Nawrot, A. Matera-Witkiewicz, B. Karolewicz, J. Angulo, Y. Khimyak and K. Nartowski

30. Osteosarcoma 3D models for drug delivery research
M. Rossi, G. Picone, F. Rossi, C. Cappadone, G. Farruggia, E. Malucelli, S. Gobbi and P. Blasi

Dermal preparations

31. A fiber-based biofilm model for evaluating the efficacy of antimicrobial actives in chronic infections
J. Wächter, P. Kaiser and M. Windbergs

32. A sweet approach to promote in vivo wound care
M. Tiboni, E. Elmowafy, M. Soliman and L. Casettari

33. Assessment of phenoxyethanol permeation in vitro in the Parallel Artificial Membrane Permeation Assay (PAMPA) model and in porcine skin in the presence of a quaternary surfactant
A. Rahma and M. Lane

34. Bacterial Nanocellulose Patches as Drug Delivery System for the Local Treatment of Onychomycosis
T. Bellmann, R. Luber, L. Kischio, B. Karl, U. Beekmann, D. Kralisch and D. Fischer

35. Carboxymethyl cellulose as 3D printable active material for wound healing
C. Alvarez-Lorenzo, L. Diaz-Gomez, I. Gonzalez-Prada, R. Millán and A. Concheiro

36. Coupling AFM, DSC and FT-IR towards elucidation of film-forming system's transitions leading to dermal film formation
M. Timotijević, D. Randjelović, B. Marković, T. Ilić, S. Savić and I. Pantelić

37. Curcumin-loaded hyaluronic acid nanoparticles for topical delivery
J. Yao, S. Abukhamees, H. M. K. Ho and H. Abdelhakim

38. Design of lipid vesicles suitable for the cutaneous administration of a fixed drug combination
L. Angelo, S. Franzè, P. Minghetti and F. Cilurzo

39. Development and characterization of foamable Mono- and Diacylphosphatidylcholine Emulsions
M. Bunk and R. Daniels

40. Development and optimisation of biopharmaceutical properties of a new microemulgel of cannabidiol for locally-acting dermatological delivery
G. Vanti, L. Grifoni, M. C. Bergonzi, E. Antiga, F. Montefusco, M. Caproni and A. R. Bilia

41. Development of a method to asses bioadhesiveness of topical forms
L. Amorós-Galicia, B. Chiclana-Rodríguez, K. Rouaz, M. Suñé-Pou, A. Nardi-Ricart, D. Mercadé-Fruto, P. Pérez-Lozano, E. García- Montoya and J. M. Suñé-Negre

42. Development of in-vitro method for investigation of interactions between semi-solid formulations and artificial sebum
A. Babic, L. Dirscherl and R. Daniels

43. Dissolving microneedles for transcutaneous immunization: Characterization of nanoparticulate Imiquimod-loaded Poly- (vinyl alcohol) microneedles
S. L. Meiser, J. Pielenhofer, A.-K. Hartmann, M. Radsak and P. Langguth

44. Effect of glycolic acid on emulsions with spironolactone for topical use – texture profile and skin penetration study
D. Ilic, M. Cvetkovic, S. Sunaric, M. Martinovic and M. Tasic-Kostov

45. Formulation and process optimization by rheological characterization of petrolatum: new insights to an old excipient
M. Herbig, M. Feichtinger and M. Koellmer

46. Incorporation of water in cetyl alcohol oily base: effect of anionic surfactants
A. Cambriani, D. R. Perinelli, B. Sabbatini, G. Bonacucina and G. F. Palmieri

47. Investigation of in-vitro and in-vivo toxicity of deep eutectic solvents as novel ingredient for cutaneous drug formulation and cosmetics.
C. H. Nguyen, R. Vallion, F. Mercier-Nomé, C. Cailleau, N. Fournier, S. Pomel, S. Kerdine-Römer, G. Barratt and F.-X. Legrand

48. Organogel-based lipstick formulations for dermo-cosmetic applications
P. Kirilov and C. Esposito

49. Study of in vitro diffusion of different diclofenac sodium content semi-solid formulations across synthetic membranes
R. Varga, S. Pál, A. Széchenyi and B. Vörös-Horváth

Gene delivery

50. Impact of PEI supplementation on Protamine-Oligonucleotide-Nanoparticles
K. Fresacher-Scheiber, I. Ruseska, M. Melcher and A. Zimmer

51. Mannosylated cationic copolymer for delivery of Oligodeoxynucleotide to Dendritic Cells for immunostimulation
G. Bellio, F. Bellato, P. Caliceti, S. Salmaso and F. Mastrotto

Nanoparticles and vesicles

52. A Box Behnken experimental design based solid lipid nanoparticle production approach for gene delivery
G. Erel-Akbaba, M. Özder and H. Akbaba

53. A green and cost-effective approach for the efficient conversion of grape byproducts into innovative delivery systems tailored to ensure intestinal protection and gut microbiota fortification
M. Perra, M. L. Manca, C. I. Tuberoso, C. Caddeo, F. Marongiu, J. E. Peris, G. Orrù, X. Fernàndez-Busquets, G. Bacchetta and M. Manconi

54. A microfluidic mixer for fast, facile and controllable preparation of various nanomedicine systems
S. Yang, Z. Qian, Y. Li, N. An, S. Zhang and X. Yin

55. A newly designed linker for an easy and efficient surface modification of PLGA-nanoparticles
M. Anzengruber, L. M. Nepustil, S. Heil, F. Gabor, M. Wirth, P. Hohl and K. Skoll

56. Alpha-gel solid lipid nanoparticles for co-loading of drugs having opposite solubility
H. V. Nguyen and V. Faivre

57. Asymmetric double bilayer vesicles for the selective targeting of B-cell chronic lymphocytic leukemia
A. Ramassone, M. M. Rashid, F. Cilurzo, L. Di Marzio, M. Fresta, D. Paolino, A. Veronese, C. Celia and R. Visone

58. Biomimetic Lipid Nanocapsules Targeting Kupffer-Browicz-Cells for the Treatment of Liver Fibrosis
J. Groner, M. Breunig and A. Göpferich

59. Characterization of nanoparticle-bound trastuzumab adsorption behavior and its cellular interaction
H. Spreen, D. Mulac and K. Langer

60. Chitosan based nanoparticles containing saffron extract for ocular administration of crocin
A. Fabiano, A. M. Piras, Y. Zambito, C. Migone and L. Cerri

61. Collagen gels as a support for cell barriers - Investigation of nanoparticle permeation
K. Prell, D. Mulac and K. Langer

62. Comparative preparative studies for the encapsulation of perfluorocarbons into polymeric nanoparticles
J. Maria Joseph, M. Rosa Gigliobianco, B. M. Firouzabadi, P. Di Martino and R. Censi

63. Design of hybrid niosomal in situ gels as feasible approach for intravesical co-delivery of curcumin and gentamicin sulfate
D. Momekova, V. Gugleva, M. M. Zaharieva, H. Najdenski and P. Petrov

64. Development and characterization of albumin-stabilized itraconazole nanoparticles manufactured by nab™ technology
A. Adick, W. Hoheisel, S. Schneid and K. Langer

65. Development and characterization of niosomes as promising platform for simultaneously co-delivery of curcumin and gentamicin sulfate
V. Gugleva, V. Michailova, S. Rangelov and D. Momekova

66. Development and physicochemical characterization of nanosized delivery system for quercetin
C. Voycheva, T. Popova, M. Slavkova, B. Tzankov and K. Yoncheva

67. Development of an oral nanovaccine for dogs against Echinococcus granulosus
M. Leroux, U. Benavides, I. Hellel-Bourtal, C. Silvarrey, P. Lawton, S. Briançon, A.-F. Pétavy, A. Esteves, E. Almouazen and S. Azzouz-Maache

68. Development, optimization and in vitro efficacy of amphotericin-loaded nanostructured lipid carriers
C. Registre, S. Carneiro and O. Santos

69. Effect of solid lipid nanoparticles loaded with curcumin and resveratrol on 3T3 cell viability and lipid profile
M. C. Cardia, A. Rosa, M. Nieddu, A. M. Fadda, R. Pireddu, F. Lai, L. Casula, D. Valenti and C. Sinico

70. Effects of supercritical carbon dioxide under conditions potentially conducive to sterilization on chemical stability of phospholipids and physicochemical characteristics of a liposome formulation
K. L. Delma, N. Penoy, B. Grignard, R. Semdé, B. Evrard and G. Piel

71. Enzyme-responsive vitamin E-based prodrug mixed micelles for targeted gemcitabine delivery to pancreatic cancer cells
M. Pereira-Silva, A. C. Paiva-Santos, F. Veiga, A. Concheiro and C. Alvarez-Lorenzo

72. Escinosomes: safe and effectiveness nanovesicles to delivery natural and synthetic drugs by intra-articular and subcutaneous routes in animal models of oxaliplatin-induced neuropathy and osteoarthritis
G. Vanti, E. Lucarini, L. Di Cesare Mannelli, F. Carta, E. Berrino, M. C. Bergonzi, C. T. Supuran, C. Ghelardini and A. R. Bilia

73. Formulation adaption of chitosan-based nanoparticles focusing on protein properties for more efficient loading
L. Valentin and R. Scherließ

74. Formulation and evaluation of the potential of ifn-β-heparin nanoparticles to prevent viral infections in chronic lung diseases
E. Basaran, H. Boland, C. Bellinghausen and J. Dressman

75. Formulation design for an antimicrobial synergistic combination of clofazimine and nisin A
M. Flores, A. Kumar and S. Hudson

76. iEDDA Reactions for the Subsequent Modification of Nanoparticles
J. Lang and A. Göpferich

77. Impact of Pravastatin-Induced Membrane Cholesterol Depletion on Nanoparticle-Cell-Binding
O. Zimmer and A. Göpferich

78. Implementation of the QbD concept in the development of lipobeads loaded with gemcitabine
C.-I. Barbălată, A. S. Porfire, L. R. Tefas, L. Vlase and I. Tomuță

79. Influence of poloxamer used as emulsifier on the crystallization temperature of trimyristin nanodroplets
O. Sukhbat, D. Steiner and H. Bunjes

80. Investigation of the relationship between pH and zeta potential using tailored DoE manufactured gold nanoparticles as a model
A. Selmani, R. Jeitler, C. Tetyczka, M. Auinger and E. Roblegg

81. Lipid Polymer Hybrid Nanoparticles to Combat Bacterial Infections
W. Brytan, V. Verma, A. O'Connor, K. Ryan and L. Padrela

82. Liposomes for T3 delivery by Microfluidics: a study on human Tendon Stem Cells
M. C. Ciardulli, P. Scala, N. Maffulli and G. Della Porta

83. Microfluidic preparation of biomimetic hybrid liposomes to enhance tumor selectivity
I. Arduino, R. M. Iacobazzi, J. Romanowski, A. Cutrignelli, R. Di Fonte, L. Porcelli, S. Serratì, A. A. Lopedota, A. Azzarriti and N. Denora

84. Microfluidization : an eco-friendly process to improve oral bioavailability of poorly soluble API
O. Lemasson, S. Bourgeois, V. Bourgeaux and S. Briançon

85. Multi-functional self-assembled nanoparticles as novel anti-oxidants for neurodegenerative diseases
V. Nele, V. Tedeschi, A. Secondo and G. De Rosa

86. One-step manufacturing of liposomal amphotericin B using the twin-screw extrusion method
W. Gu, D. Jones, G. Andrews and Y. Tian

87. Optimization of co-loaded liposomes for the delivery of gemcitabine and salinomycin in colorectal cancer
L. R. Tefas, I. Toma, A. Sesarman, M. Banciu, A. Jurj, I. Berindan-Neagoe and I. Tomuta

88. PEG-b-PTMC polymersomes as controlled drug delivery systems
C. Lebleu, A. Martin, A. Mutschler, E. Garanger and S. Lecommandoux

89. Personalized Dermal Patches – Formulation development of Nano Suspension for inkjet printing of tailored medicine
M. Fligge and J. Breitkreutz

90. Phospholipid-surfactant vesicles based hydrogels for the topical administration of diclofenac diethylamine
D. R. Perinelli, A. Cambriani, B. Sabbatini, G. F. Palmieri and G. Bonacucina

91. Physicochemical/structural investigation of lipid nanoparticles with high lecithin amounts loaded with patent protected pyrazoloquinolinone ligand DK-I-60-3
J. Mitrović, M. Petković, D. Randjelović, J. Đoković, D. Knutson, J. Cook, V. Savić, M. Savić and S. Savić

92. Placental targeting through peptide functionalized liposomes for pregnancy associated disorders
L. Fliedel, K. Alhareth, J. Seguin, M. Difonzo, T. Fournier, N. Mignet and K. Andrieux

93. Preparation, stabilisation, isolation and tableting of valsartan nanoparticles using a semi-continuous carrier particle mediated process
A. Kumar, K. A. Ramisetty, S. Bordignon, K. Hodnett, P. Davern and S. Hudson

94. Preparation, stabilization and isolation of valsartan nanoparticles with mesoporous silicates
M. Bergillos Ruiz, A. Kumar, P. Davern, A. Rasmuson, B. K. Hodnett and S. P. Hudson

95. Process Control and Performance of PLGA Nanoparticles
A.-M. Struzek and R. Scherließ

96. Protein interaction with biocompatible and biodegradable novel nanohydrogels
M. R. Gigliobianco, S. Deng, B. M. Firouzabadi, R. Censi and P. Di Martino

97. Redox-responsive polymersomes for targeted doxorubicin delivery
C. Ferrero, M. Casas and I. Caraballo

98. Scaled-up production of dissolution enabling lumefantrine nanoparticles
J. Yang, H. Du, L. Ma, S. Panmai, Y. Zhang, C. Tian, K. Ristroph, L. Wang, M. Armstrong and R. Prud'homme

99. Small-scale formulation of a new drug candidate in lipid nanoparticles and its transfer behavior in porcine serum
N. Baumann, J. Baumgarten, C. Kunick and H. Bunjes

100. Solid lipid nanoparticles as a delivery system for the dual-acting bacteriocin lacticin 3147
A. Ryan, P. Patel, P. O' Connor, R. P. Ross, C. Hill and S. Hudson

101. Stability and Pharmacokinetics study of Liposomal Amphotericin B by Supercritical Antisolvent Process
J. Lee, S. M. Abuzar, P. R. Karn, W. Cho, H. J. Park, C.-W. Cho and S.-J. Hwang

102. Thermodynamic understanding of polymer mediated drug-rich phases generated through the liquid-liquid phase separation
K. Qian, G. Andrews, Y. Tian and W. Gu

103. Thiol groups on nanoparticle surfaces promote unspecific cell interaction in targeting studies
F. Linß, D. Mulac and K. Langer

104. Virusmimetic nanoparticles that identify target cells exclusively via ectoenzymes
M. Walter and A. Göpferich

105. Zein/phospholipids hybrid nanoparticles as potential drug carriers of photo-sensitive compounds
A. Gagliardi, S. Voci, E. Giuliano, M. C. Salvatici, M. Celano, M. Fresta and D. Cosco

Nucleotide delivery

106. CPP identification of the LNP microfluidic manufacturing process for siRNA delivery
R. Vargas, D. Narváez-Narváez, A. Nardi-Ricart, D. Mercadé-Frutos, P. Pérez-Lozano, E. García-Montoya, J. M. Suñe-Negre, C. Hernández-Munain, C. Suñe and M. Suñe

107. Successful spray drying of siRNA embedded lipid nanoparticles for dry powder application targeting pulmonary diseases
C. M. Zimmermann, D. Baldassi, K. Chan, N. B. P. Adams, A. Neumann, G. Burgstaller, D. Witzigmann and O. Merkel

108. Transfection of Calu-3 cells with mRNA/DOTAP:DOPE-lipoplexes: Influence of weight ratio and forming media
J. Schembera and R. Scherließ

Protein formulation and aggregation

109. Adjustment of specific residual moisture levels in completely freeze-dried protein formulations by controlled spiking of small water volumes
K. Lo Presti and W. Frieß

110. Application of isothermal microcalorimetry to predict unwanted crystallization in lyophilized amorphous pharmaceuticals
S. Groel, T. Menzen and G. Winter

111. Background Membrane Imaging – Bringing Particles into Focus
T. Höltkemeier, H. Aragao, I. Fischer and W. Friess

112. Can interaction behavior of proteins in the freeze concentrate be measured by SAXS? A preliminary case study
R. M. Nagel and W. Frieß

113. Development, characterization and in vitro cytotoxicity of gliadin nanoparticles
S. Voci, A. Gagliardi, M. C. Salvatici, M. Fresta and D. Cosco

114. Drying stability of a protein with a thermostable evolutionary mutation
W. Brytan and L. Padrela

115. Evaluation of potential functionality-related characteristics of polysorbates for biopharmaceutical preparations
Y. Grether, D. Tobler and O. Germershaus

116. In silico analysis of infliximab self-interaction
J. Binder and W. Frieß

117. Lyso-phosphatidylcholine as an Interfacial Stabilizer in Parenteral Protein Formulations
E. Papadopoulos, B. C. Arrahmani and W. Friess

118. Mechanical impact on glass particle formation in glass vials
D. Henle, L. Muehlfeld, D. Molnar and W. Friess

119. Novel developmental surfactant for improved protein stabilization
J. Katz, B. Yezer, A. Nolin, S. Jordan and O. Petermann

120. Oxidative degradation of polysorbates: potential impact on the drying stability of biopharmaceuticals and mitigation strategies
J. Pinto, M. Rajkovaca and A. Paudel

121. Spray drying chymotrypsin: comparison of the destabilising effect of different spray drying nozzles
F. Roth and R. Scherließ

122. Spray drying: excipient screening for efficient formulation development of biologicals
V. Timmerman, L. Vandevivere, E. De Coninck, L. De Smet and F. Van der Gucht

Pulmonary delivery

123. Development of ibuprofen containing innovative dry powder inhalers for the treatment of cystic fibrosis
P. Party, M. L. Klement and R. Ambrus

124. Development of micro/nanoparticles for targeted drug delivery in the treatment of pulmonary arterial hypertension
S. Tsilova, M. Parhizkar, R. Lever and B. Schreiber

125. Drug delivery technology: at the crossroads of microbial metabolomics and human therapeutics
M. Puccetti, M. Pariano, M. Ricci and S. Giovagnoli

126. Elucidation of the effect of added fines on the performance of dry powder inhalation formulations
M. Stankovic-Brandl, S. Radivojev, P. Sailer and A. Paudel

127. In vitro-in silico correlation (IVIVC) for inhaled therapeutics: relevance of different dissolution methodologies
S. Radivojev, V. Reinisch, J. T. Pinto, E. Fröhlich and A. Paudel

128. Investigation of coatings on plastic surfaces to control the adsorption of inhalable particles
K. Lachmann, K. S. Rimpl, J. H. Finke and M. Thomas

129. Modifying particle surface of model Dry Powder Inhalation (DPI) carriers
S. Bock and R. Scherließ

130. Particle engineering of itraconazole by spray drying of nanosuspensions for high dose dry powder inhalation
A.-C. Willmann, G. Böck, H. Wachtel, K. Berkenfeld and K. G. Wagner

131. Production of a dry form of liposomes encapsulating two active ingredients for pulmonary use by a supercritical CO2 process
N. Penoy, B. Grignard, B. Evrard and G. Piel

132. Proof-of-concept: Surface energy alterations as particle engineering strategy in DPI formulations
N. Bungert, M. Kobler and R. Scherließ

Transdermal delivery

133. 3D printed hollow microneedles for transdermal insulin delivery
I. Xenikakis, K. Tsongas, E. K. Tzimtzimis, O. L. Katsamenis, D. Tzetzis and D. G. Fatouros

134. A simple gelatin-based skin substrate to explore novel anti-infective therapies for Acne inversa
S. Frisch, S. Aliyazdi, N. Jung, B. Veldung, U. F. Schäfer, B. Loretz, T. Vogt and C.-M. Lehr

135. An assessment of the use of hydrogel-forming microneedles in the transdermal delivery of risedronate sodium
A. Ripolin, Q. K. Anjani, M. B. McGuckin, P. E. McKenna and R. F. Donnelly

136. Assessment of the permeation of a tattoo ink through Strat M membranes using an innovative dynamic diffusion system
G. Condrò

137. Development of a Suitable Ink for the Manufacturing of Microneedles by Inkjet Printing
L. Lammerding and J. Breitkreutz

138. Development of implantable microneedles for sustained delivery of risperidone
L. Li, L. Zhao, E. Larrañeta and R. Donnelly

139. Dissolving bilayer microneedle array patches for the delivery of pramipexole to treat Parkinson's disease
M. McGuckin, Y. Li, E. Larraneta and R. Donnelly

140. Dissolving polymeric micro-array patches loaded with simvastatin nanocrystals for long-acting drug release
N. Qin, M. Li, A. Paredes and R. Donnelly

141. Dry reservoir coupled with hydrogel forming microneedles: a composite strategy for transdermal delivery of cephalosporin
A. Sabri, Q. Anjani, E. Utomo, A. Ripolin and R. Donnelly

142. Hydrogel-Forming Microarray Patches for the in vivo deposition of the hydrophobic drug; atorvastatin
Y. Naser, I. Tekko, L. Vora, K. Peng, H. McCarthy and R. Donnelly

143. Hydrogel-forming microarray patches with cyclodextrin drug reservoirs to enhance the long-acting delivery of the poorly soluble anti-HIV drug cabotegravir sodium
F. Volpe-Zanutto, L. Vora, P. E. McKenna, I. Tekko, A. D. Permana, Q. Anjani, C. Jarrahian, A. J. Paredes, H. O. McCarthy and R. F. Donnelly

144. Hydrogel-forming microneedle array patches for transdermal ibuprofen sodium delivery
L. Li, Q. Anjani and R. Donnelly

145. Hydrogel-forming microneedle array patches: a versatile system for transdermal delivery of tuberculosis drugs
Q. K. Anjani, E. Larrañeta and R. F. Donnelly

146. In situ skin penetration analysis by confocal raman microscopy a new method
R. Krombholz and D. Lunter

147. Microarray Patches for Delivery of Antiretroviral Nanocrystals Coupled with a Short Application Time
M. Abbate and R. Donnelly

148. Microneedle-mediated intradermal delivery of long-acting bictegravir nanosuspension for potential treatment of HIV infection
C. Zhang, L. Vora, I. Tekko, K. Peng, A. Paredes and R. Donnelly

149. Nanocrystal-based dissolving micro-array patches for potential long-acting transdermal delivery of the anti-Parkinson's agent rotigotine
Y. Li, J. Wang, L. Vora, I. Tekko, A. Paredes and R. Donnelly

150. Novel application of the Positron Annihilation Lifetime Spectroscopy technique to identify free volumes in human ex vivo stratum corneum
D. Bazar, K. Pieńkowska, J. Filipecki and K. Chamerski

151. Novel ionic liquid form of donepezil enhances solubility and skin permeability for the development of donepezil transdermal patch formulation
L. Dinh, S. Lee and S.-J. Hwang

152. Osmolyte laced hydrogel forming microneedles: a potential platform for rapid and minimally invasive therapeutic drug monitoring
Q. K. Anjani, A. H. Sabri, E. Utomo and R. F. Donnelly

153. Raman spectroscopy at different laser wavelengths in analyzing skin properties of mixed PEGylated emulsifier systems
Y. Liu and D. Lunter

154. Release of rifampicin from liposomes depends on drug and lipid degradation
C. M. Wallenwein, M. Ashtikar, M. Thurn, J. Dressman and M. G. Wacker

155. Silicone PSA adjustment for the improved in vitro performance of transdermal delivery patches
B. Mikolaszek, J. Strankowska, M. Jamrógiewicz, D. Rosłonowski and M. Sznitowska

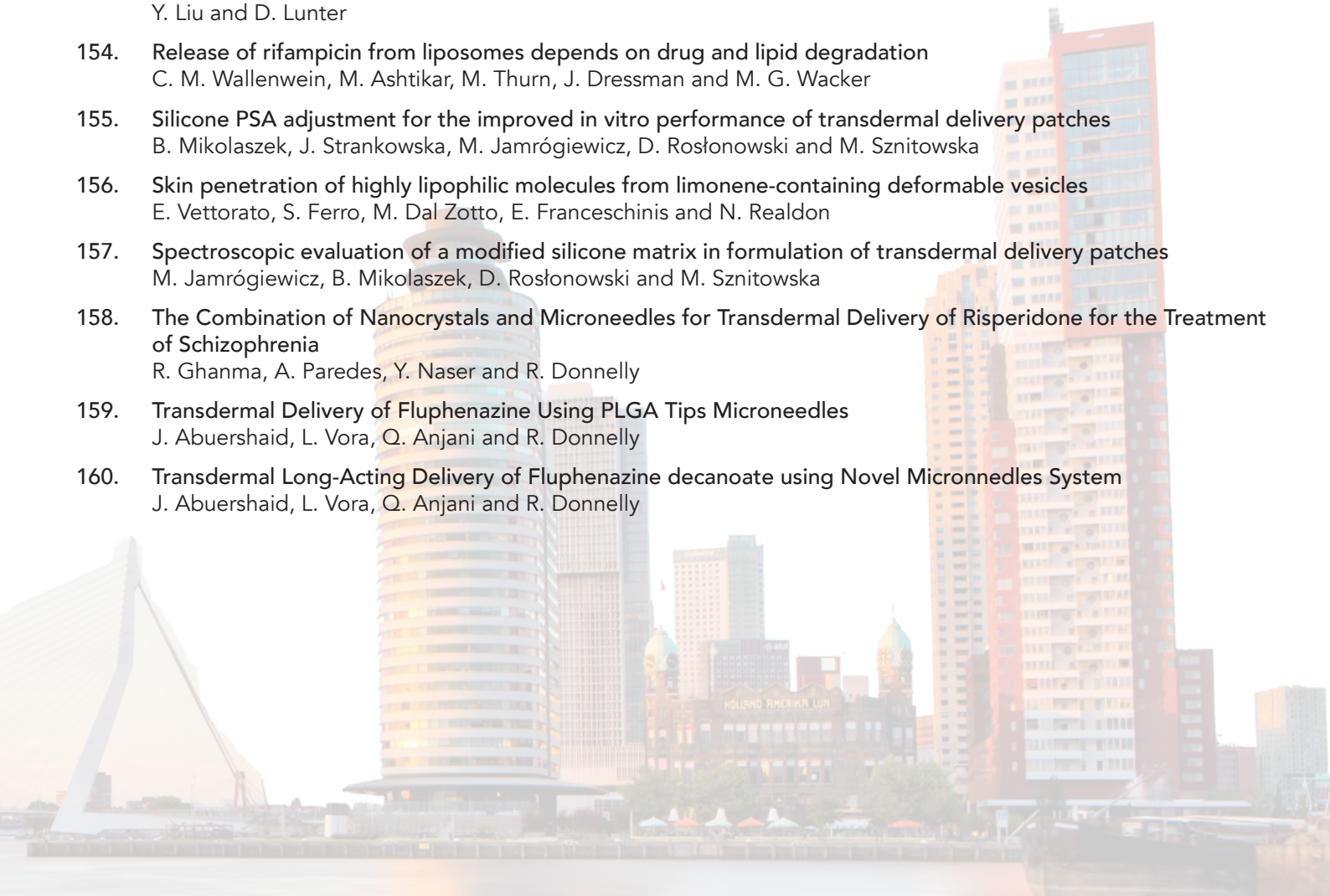
156. Skin penetration of highly lipophilic molecules from limonene-containing deformable vesicles
E. Vettorato, S. Ferro, M. Dal Zotto, E. Franceschinis and N. Realdon

157. Spectroscopic evaluation of a modified silicone matrix in formulation of transdermal delivery patches
M. Jamrógiewicz, B. Mikolaszek, D. Rosłonowski and M. Sznitowska

158. The Combination of Nanocrystals and Microneedles for Transdermal Delivery of Risperidone for the Treatment of Schizophrenia
R. Ghanma, A. Paredes, Y. Naser and R. Donnelly

159. Transdermal Delivery of Fluphenazine Using PLGA Tips Microneedles
J. Abuershaid, L. Vora, Q. Anjani and R. Donnelly

160. Transdermal Long-Acting Delivery of Fluphenazine decanoate using Novel Micronnedles System
J. Abuershaid, L. Vora, Q. Anjani and R. Donnelly



Poster session on Wednesday, 30 March 2022

Continuously exhibited from 09:00 to 17:00 h, with special presentations by authors from 11:00 to 11:30 h and 13:00 to 15:00 h. The number indicates the poster panel number.

Controlled drug delivery

01. A new gastroretentive system for controlled release of drugs
S. Baldassari, A. Balboni, G. Ailuno and G. Caviglioli

02. Amine modified microporous silica nanoparticles for drugs delivery
A. Stefanache, M. Ignat, A. Bujor, I. I. Lungu, M. Shaat and L. Ochiuz

03. Anti oxidant Effect of Oleuropein loaded Unsaturated Fatty Acid Vesicles
A. Mancuso, M. C. Cristiano, A. Barone, M. Tarsitano, M. Fresta and D. Paolino

04. Assessment of Active Pharmaceutical Ingredient-Ionic Liquid (API-IL) release from a biopolymer matrix
M. Thadasack, L. Chaunier, H. Rabesona, L. Viau, S. Guessasma and D. Lourdin

05. Does tablet porosity impact drug release rates from sustained release tablets directly compressed from binary blends?
M. Czygan, B. Leclercq and S. Florin Muschert

06. Evolution of the microstructure and the drug release upon annealing the drug loaded lipid-surfactant microspheres
V. Kushwah, D. G. Lopes, I. Koutsamanis, H. Plank, I. Ardelean, S. L. Shamblin, A. Prpich, M. T. a. Ende, H. F. Schmidt and A. Paudel

07. Glidant Influence on Metoprolol Succinate Release from SR Microparticles and Free Film Properties
K. Patel, D. Murnane, C. Richardson and F. Liu

08. Impact of Critical Material Attributes of HPMC on the Release of Gliclazide from Hydrophilic Matrix Tablets
C. Huettermann and H. Feldmann

09. Influence of in vitro dissolution parameters on drug release from intravitreal model implants
T. Auel, J. Seidel, W. Weitschies and A. Seidlitz

10. Investigation of the effects of a colon drug delivery system in an experimental model of colitis
D. Hales, D.-M. Muntean, M. A. Neag, B. Kiss, M.-G. Ștefan, L. R. Tefas, I. Tomuță, I.-A. Rațiu and A. Porfire

11. Micelles-loaded polymeric films to improve cyclosporine solubility and ocular delivery to the posterior segment
M. Ghezzi, S. Pescina, C. Padula, P. Santi and S. Nicoli

12. Mycobacterium abscessus Infection Treatment: Rifampicin–Liposomes Intracellular Uptake and Antibacterial Activity Evaluation.
J. Forte, F. Rinaldi, P. N. Hanieh, S. Sennato, F. De Santis, M. Fraziano, S. Casciardi, C. Marianecci, F. Bordi and M. Carafa

13. Novel Hydrogels based on Polymerized Ionic Liquids (PILs) as Innovative and Controllable Drug Carriers
A. Mildner and J. Großeheilmann

14. Oral controlled release from thin polymeric films based on polysaccharides
S. Strich, M. Lahiani-Skiba, R. Amraoui, M. Skiba and Y. Karrout

15. PLGA implants for controlled dexamethasone delivery: Impact of the polymer chemistry
S. Wachowiak, F. Siepmann, J. Siepmann and M. Hamoudi

16. Polymeric micro/nano-particles as a glucose delivery system for stem cell therapy in osteoarthritis
P. Gonzalez Fernandez, F. Abdelmoula, C. Rodríguez Nogales, O. Jordan and E. Allémann

17. Rheological and mechanical characterization of novel SMEDDS-based drug delivery systems
Z. Ćetković, I. Vasiljević, S. Cvijić and D. Vasiljević

18. Scaling up Aqueous Enteric Coating with Hypromellose Acetate Succinate (HPMCAS)
I. Lesser and A. Sauer

19. Synthesis and characterization of new temperature-sensitive polymer with potential drug delivery carrier
C. Voycheva, I. Ivanova, M. Slavkova, T. Popova, D. Tzankova, B. Tzankov and S. Tzankov

20. Targeted gold nanoparticles for controlled anticancer drug release
R. Daniele, F. Mastrotto, M. Garofalo, G. Marzaro, P. Caliceti and S. Salmaso

Drug printing

21. 3D printed dexamethasone-loaded punctal plugs for dry eye disease
X. Xu, S. Awwad, L. Diaz-Gomez, C. Alvarez-Lorenzo, S. Brocchini, S. Gaisford, A. Goyanes and A. W. Basit

22. 3D printing of orodispersible film for poorly soluble drug
K. T. Chow, Y. S. Lui, N. Chua, W. C. Foo and O. Haeusler

23. 3D-Printed Individualized Therapies: Future scenarios and Digitalization
G. Eleftheriadis, J. Rantanen and D. Fatouros

24. 4D printing of reservoir-containing drug delivery systems intended for bladder retention
M. Uboldi, A. Melocchi, A. Napoli, C. Perrotta, M. Cirilli, I. Filippin, A. Gazzaniga and L. Zema

25. A smartphone-enabled 3D printer for fabricating personalised medicines
X. Xu, A. Seijo-Rabina, A. Awad, C. Rial, S. Gaisford, A. W. Basit and A. Goyanes

26. An investigation into the effect of formulation factors on the critical quality attributes of granules prepared by selective laser sintering
I. Vasiljević, E. Turković, I. Aleksić, S. Ibrić and J. Parojčić

27. Assessing the Inkjet Printability of Liposomes
C. Alva, I. Vidakovic, H. Wen-Kai, B. Lorber, A.-L. Schachner-Nedherer, M. Zettl, J. Khinast and R. Prassl

28. Budesonide Mini-tablets produced by Direct Powder Extrusion 3D Printing for the treatment of IBD in paediatric patients
M. Pistone, G. F. Racaniello, V. Laquintana, A. Lopalco, A. Cutrignelli, M. Franco, A. A. Lopedota and N. Denora

29. Combination 3D printed tablets: Multiple release profiles for personalized drug delivery
V. Lesáková, S. Slezáková and F. Štěpánek

30. Critical points for predicting 3D printable filaments behaviour
I. Caraballo, V. Linares, E. Galdón and M. Casas

31. Development and optimization of formulation manufactured by LCD 3D printing method
J. Pyteraf, A. Pacławski, W. Jamróz, M. Kurek, J. Szafraniec-Szczęsny, M. Paluch and R. Jachowicz

32. Development of drug loaded particles for ex tempore preparation of 2D printing cartridges via spray drying method
B. Sterle Zorec and R. Dreu

33. Direct Ink Writing as a Novel Solid Nanoformulation Manufacturing Process
S. Abukhamees, R. Fitaihi, A. Gravilidiis and D. Craig

34. Direct powder extrusion 3D printing of polyhydroxybutyrate implants for prolonged drug release
S. Moroni, M. Tiboni and L. Casettari

35. Evaluating mechanical properties of paroxetine-loaded filaments to enable printability by fused deposition modelling
S. Figueiredo, A.-I. Fernandes, F. Carvalho and J. F. Pinto

36. Filament-based 3D-printing of unprintable lipid-based excipients
M. Abdelhamid, I. Koutsamanis, C. Corzo, M. Spoerk, A. Ocampo, C. Alva, E. Slama, D. Lochmann, M. Katschnig and S. Salar-Behzadi

37. Formulation and Quality Consideration of printlets of Cannabidiol Produced by Fused-Deposition Modeling
O. Jennotte, N. Koch, A. Lechanteur and B. Evrard

38. Fused deposition modelling for the development of antiplatelet materials for cardiovascular applications
J. Domínguez-Robles, E. Utomo, V. A. Cornelius, Q. K. Anjani, A. Korelidou, A. Margariti, M. Delgado-Aguilar, Q. Tarrés and E. Larrañeta

39. Hot Melt Extrusion and Fused Deposition Modelling of a Thermolabile Drug
L. Hoffmann, J. Breitkreutz and J. Quodbach

40. How do polymer composition and infill density of 3D printed oral forms influence the dissolution rate of a BCS II molecule ?
C. Parulski, E. Gresse, O. Jennotte, A. Lechanteur and B. Evrard

41. How far can we go? The evaluation of maximum drug loading in the filament with fluconazole
M. Kurek, J. Pyteraf, W. Jamróz, D. Kramarczyk, J. Szafraniec-Szczęsny, M. Paluch and R. Jachowicz

42. Inkjet Printing as a Novel Onychomycosis Treatment
T. Pollard, M. Bonetti, A. Day, S. Gaisford, M. Orlu, A. Basit, S. Murdan and A. Goyanes

43. Is it possible to 3D-print orodispersible tablets (ODTs) using a fused deposition modeling (FDM)?
J. Pyteraf, T. Tranová, W. Jamróz, M. Kurek, J. Loskot, W. Brniak, J. Szafraniec-Szczęsny, J. Mužíková, M. Paluch and R. Jachowicz

44. New approaches for precise particle engineering via inkjet printing
C. Winter, M. Zettl, G. Leitinger, W.-K. Hsiao, M. Spoerk, J. Mantanus, E. Hadjittofis, E. Roblegg and J. Pinto

45. Quality control evaluation of paediatric dosage forms: 3D printing vs mold-casting method
K. Chachlioutaki, C. I. Gioumouxouzis, L. Havouzis, C. Karavasili and D. G. Fatouros

46. Systematic development of a binder containing ink for additive manufacturing via binder jetting
M. Schulz, M. Bogdahn, S. Geissler and J. Quodbach

47. The importance of exploring the rheological properties of formulation inks for 3D printing dosage form manufacture
M. I. Evangelista Barreiros, I. A. Ashcroft, R. Wildman and C. J. Roberts

48. Using machine learning to predict the developability of 3D printed drug products
B. M. Castro, M. Elbadawi, J. J. Ong, T. Pollard, Z. Song, S. Gaisford, G. Pérez, A. Basit, P. Cabalar and A. Goyanes

Oral delivery

49. A new aminomethacrylate copolymer for solubility improvement - from copolymer synthesis to development and characterization of amorphous solid dispersions
F.-P. Schmied, A. Bernhardt and S. Klein

50. A Non-Nutritive Fibre Meal Alters the Expression of Efflux Transporters in the Gastrointestinal Tract
F. K. Gavins, Y. Mai, L. Dou, J. Liu, F. Taherali, M. E. Alkahtani, S. Murdan, A. W. Basit and M. Orlu

51. Acetaminophen as a Model drug to Evaluate Marketed Microcrystalline Cellulose 200 in Direct Compression
C. Popescu, D. Yu and S. W. Hoag

52. Applications of lipid-based formulations and the benefits of integrating manufacturing and clinical testing in formulation selection
A. Hosny, W. Lin and P. Scholes

53. Challenges in predicting the micellar solubilization of three weakly basic compounds in Fasted State Simulated Intestinal Fluid
K. Krollik, A. Lehmann, C. Wagner, H. Kubas and W. Weitschies

54. Clinical trial formulation printing: fast, flexible and achievable?
K. van den Heuvel and B. Dickhoff

55. Comparison of Three Phases of Continuous Coater Operation during Application of High Opacity Coating and High Gloss Coating onto Multivitamins
J. Teckoe, T. Mehaffey, C. Neely, M. Ghimire and A. Rajabi-Siahboomi

56. Delivery of cannabidiol across the blood brain barrier following oral administration for the treatment of glioblastoma multiforme
A. Brookes, D. Scurr, M. Alexander, T. Bradshaw and P. Gershkovich

57. Development of a Liposomal System for the Oral Delivery of Teriparatide
T. Röder, P. Uhl, M. Gynther and G. Fricker

58. Development of alginate esters as novel multifunctional excipients for direct compression
N. Sanchez, B. Bataille, J.-C. Rossi and I. Soulairol

59. Development of High Dose Metformin ER and Low Dose Glimepiride IR as a Bilayer Tablet
G. Pürsöken, V. Ambudkar, S. Damle, H. Bankhede, N. Tayade, P. Thakker, M. Rane and A. Rajabi-Siahboomi

60. Drug Release Stability of Propranolol Hydrochloride ER Multiparticulates using Ethylcellulose Dispersions
P. Smith, R. Mehta, M. Ghimire and A. Rajabi-Siahboomi

61. Effect of glycerol on the viscoelastic properties of soft capsule shell formulations during ribbon formation
S. Pugliese and G. Reich

62. Effect of Particle Size on the Dissolution Performance of Sustained Release Hot-melt Extrudates
Y. Mansuroglu and J. Dressman

63. Evaluation of copolymer micelles as curcumin delivery system
K. Yoncheva, M. Zaharieva, A. L. Martinez-Lopez, H. Najdenski and J. M. Irache

64. Evaluation of self-nanoemulsifying drug delivery systems loaded with exenatide phospholipid complexes using an in vitro proteolysis model
R. Venkatasubramanain, O. Alavi, T. Lind, T. Rades and A. Müllertz

65. Evaluation of Sodium Lauryl Sulfate as lubricant in immediate-release tablet formulations
B. Sabbatini, A. Berardi, A. Cambriani, G. F. Palmieri and M. Cespi

66. Failure of Enteric-Coated Dosage Forms: Is a Novel Generation of Enteric Polymethacrylates the Answer?
J. Al-Gousous, J. Blechar, E. Kersten, H. Frey and P. Langguth

67. Five strategies and one delivery platform - Formulation of fenofibrate in orodispersible films
D. Steiner, M. Tidau and J. H. Finke

68. Impact of granulating liquid levels on MCC-mannitol-metformin granules and resultant tablet – A systematic understanding based on water requirement determinations
C. Siow, C. Low, K. H. Lam, B. X. Tan and P. Lefevre

69. Impact of Opacifier Type in a Film Coating Formulation on Photostability of Tablet Ingredients
J. Teckoe, S. Badger, M. Ghimire and A. Rajabi-Siahboomi

70. In silico evaluation of drug release from metronidazole coated matrix tablets
R. Arévalo Pérez, C. Maderuelo and J. M. Lanao

71. In vitro modified-release of the cytotoxic agents, 4-[4,4-diphenyl-4-(1-tricyclo[3.3.1.13,7]decyl)butyl)-1-methyl-piperazine and 1-methyl-4-{3-[4-[α-(1-adamantyl)phenylmethyl]phenyl]propyl}piperazine from matrix tablets
M. Vlachou, A. Siamidi, A. Dedeloudi, K. Antonara, E. Tseliki, D.-A. Vlassi, G.-I. Sotiropoulou, A.-S. Foscolou and I. P. Papanastasiou

72. In vitro-in silico study on the influence of formulation factors and medium pH on metformin dissolution and absorption
S. Cvijić, J. Ignjatović and J. Đuriš

73. Investigation of the bioperformance dissolution test conditions for gliclazide immediate release tablets
J. Ignjatović, J. Rajičić, M. Spasojević, J. Đuriš, S. Ibrić and S. Cvijić

74. Low impact of relative humidity on granules compactibility when using modified starch as granulation binder
N. Descamps, E. Lafarge, G. Le Bihan, O. Häusler and P. Lefèvre

75. Machine Learning predicts the effect of food on orally administered medicines
F. K. Gavins, Z. Fu, M. Elbadawi, A. W. Basit, M. R. Rodrigues and M. Orlu

76. Matrix Effects on the Performance of Disintegrants in Hydrophobic Tablets
S. Bauhuber, M. Launer, A. Geiß and G. Warnke

77. Microcrystalline cellulose (MCC) 102 and 200 screening as filler in direct compression for acetaminophen and griseofulvin as model drugs
C. Popescu, D. Yu and S. w. Hoag

78. Microfluidic manufactured solid lipid nanoparticles for oral peptide delivery
B. Arpaç, F. Mastrotto, M. Garofalo, P. Caliceti and S. Salmaso

79. N-[2-(4-fluoro-3-methoxyphenyl)-2-methylpropyl]propionamide, a new melatonin receptor selective ligand: in vitro dissolution studies
M. Vlachou, D. Anagnostopoulou, A. Siamidi, C. Protopapa, R. Kompogennitaki, N. Efstathiou and I. Papanastasiou

80. Opening modes and release rate of the press-coated tablets (Tab-in-Tab): influence of compression parameters and tablet geometry
L. Picart, V. Mazel, A. Moulin and P. Tchoreloff

81. Oral induction of mucosal immune responses, using various adjuvants in combination with Microcontainers for protection and delivery through the GI tract.
P. H. R. Carlsen, L. H. Nielsen, D. Christiensen and A. Boisen

82. Pectin as a Targeting Component for an Oral Colon Delivery Platform Based on a Combination Approach
S. Moutaharrik, L. Palugan, M. Cerea, L. Zema, A. Melocchi, A. Foppoli, C. Neut, F. Siepmann, J. Siepmann and A. Gazzaniga

83. Performance and Stability of an On-Dosage Authentication Technology Using Molecular Tags on a Coated Model Active
J. Teckoe, B. Prusak, D. To and A. Rajabi-Siahboomi

84. Pregelatinized starch as a binder in wet granulation: Optimization of the incorporation rate
O. Häusler, G. Le Bihan, P. Lefèvre and J.-B. Palmieri

85. Processing a deep eutectic mixture by spray drying to produce a solid form suitable for tableting
M. Ferreira Monteiro, L. Tajber and A. Umerska

86. Simplifying high shear granulation: dry incorporation of pregelatinized starch as binder
O. Häusler, G. Le Bihan, P. Lefèvre and J.-B. Palmieri

87. Solid-State Transformations of Fluoroquinolone Drug Levofloxacin via Ball Milling
L. Kadri and L. Tajber

88. Supersaturation of Loperamide in Presence of PVP K90
M. Chronowska, C. Saal and J. Dressman

89. Tablet powder mix computational physics requirements to be processed by direct compression (DC)
N. Descamps, P. Lefèvre, E. Hu and C. Popescu

90. Ternary amorphous solid dispersions - Impact of surfactants on the hot melt extrusion process, solid state properties and dissolution performance
E. Trenkenschuh, A. Neifer, R. Hoffmann and K. Schäfer

91. The architecture of amphiphilic cyclodextrin nanocarriers determines transepithelial transport
S. Vogel-Kindgen, F. Brettner, N. Jung and M. Windbergs

92. The synergy between polymeric nanoparticles and oral dosage forms to improve drug delivery
L. A. Morelli, L. Salvioni, E. Ochoa, L. Palugan, M. Colombo and D. Prosperi

93. The way how tablet porosity and tensile strength affect disintegration using crospovidone as a disintegrant
F. El-Saleh, S. Trofimov and C. Muehlenfeld

Pharmaceutical manufacturing and engineering

94. A First Step towards the Development of a Nano-Production Line using Multidisciplinary Quality by Design Approaches
R. Jeitler, C. Tetyczka, C. Glader, D. Fiedler and E. Roblegg

95. A new approach for Quality by design in encapsulation and compression
T. Brinz, B. Wagner and F. Schwarzmann

96. A new SeDeM-SLA expert system for screening of solid carriers for the preparation of solidified liquids
D. S. Shah, D. K. Jha, S. Gurram, M. Suñé-Pou, E. Garcia-Montoya and P. D. Amin

97. Amorphization Versus (Co)Crystallization of a Model Pharmaceutical Drug Using Supercritical Assisted Spray Drying
A. O'Sullivan, K. M. Ryan and L. Padrela

98. Analysis of the shear stresses in a filling line of parenteral products: the role of tubing and fittings
C. Moino, B. Scutellà, M. Bellini, E. Bourlés, G. Boccardo and R. Pisano

99. Co-amorphization of olanzapine on the surface of pellets as an advantageous method to enhance the dissolution rate of the drug
R. Azevedo, N. F. da Costa, A. I. Fernandes and J. F. Pinto

100. Comparative evaluation of spray drying and bead coating in the manufacturing of amorphous solid dispersions
E. Boel, F. Reniers, W. Dehaen and G. Van den Mooter

101. Comparison of amorphous solid dispersions prepared by Vacuum compression molding and Hot melt extrusion
E. Lindenberg and F. Fabregue

102. Comparison of scale-up strategies for twin-screw granulation
M. Franke, T. Riedel, R. Meier and P. Kleinebudde

103. Computational Fluid Dynamics (CFD) modelling as an acceleration tool for vaccine process development
D. Puerta Jiménez, W. den Dekker, P. Ramirez Vazquez, J. Perrigue, G. Wang and H. Rozema

104. Containment represented by a two-chamber setup – Comparison of flow visualization using smoke with computational fluid dynamics simulation
S. Wirth, C. S. Leopold and M. Schöler

105. Continuous Manufacturing of A Topical Semi-Solid Formulation via QbD approach: Influence of Process Parameters on Product Quality
T. Digkas, J. Perrigue, S. Saclier, C. Hardy, C. Vervaet and T. De Beer

106. Continuous manufacturing of modified release Metformin formulations using directly compressible HPMC, Part 2
C. Mühlenfeld, D. Sieber, R. Meier, D. Emanuele and P. Harbaum

107. Controlled local release of ibuprofen from a biodegradable nerve conduit fabricated via solvent-cast direct writing
S. H. Chung, S. Barker, D. Craig and J. Huang

108. Conversion of a low-dose bisoprolol fumarate formulation from a wet granulation to a direct compression process
T. Hessberger, D. Zakowiecki, T. Heß and L. Schmitt

109. Cryopreservation of hydrogel-encapsulated mammalian cells: importance of encapsulation method and capsule size
N. Ortiz Silva, S. Denis, J. Vergnaud and H. Hillaireau

110. Determining of characteristic screw parameters for the 1D simulation of pharmaceutical twin-screw extrusion
V. Kimmel, J. Winck and M. Thommes

111. Direct comparison of protein based amorphous formulations to other dissolution rate enhancing technologies: A case study with rifaximin
M. M. B. Kjellin, X. Zhuo, Z. Schaal, K. Löbmann and D. Leng

112. Dissolvable Microneedle Array Containing Dexamethasone-Loaded PLGA Microparticles for Scleral Drug Delivery
R. Fitaihi, D. Craig and M. Orlu

113. Effect of Precirol ATO 5 concentration and twin-screw melt granulation temperature on the ascorbic acid release
V. Mohylyuk, Y. Ding and G. P. Andrews

114. Effects of Neighboring Vials on Collapse in Freeze-drying
E. Richert and W. Friess

115. Elastic properties of co-processed excipients and their corresponding physical admixtures, evaluated by ultrasonic-measurement system KIM
B. Frindt, R. Lammens and F. Penz

116. Employing compaction simulation to support development and quality prediction of bilayer tablets produced in high-speed manufacturing
F. Gütter and T. Cech

117. Engineered-inhaled particles: influence of carbohydrates excipients nature on powder properties and behavior
A. Lechanteur, E. Plougonven, L. Orozco, G. Lumay, N. Vandewalle, A. Léonard and B. Evrard

118. Enhancing the Mechanical Properties of a Decellularized Vascular Conduit via an Electrospun Synthetic Polymer
B. Alsaffar, D. Craig, T. Ansari and M. Parhizkar

119. Evaluating the impact of raw material variability on the tableting properties of a direct compression formulation by dynamic compaction analysis
S. Iurian, T. Casian, A. Gâvan, A. Porfire, A. L. Pop, S. Crișan and I. Tomuță

120. Evaluation of an ultra-high solids film coating system to reduce process times while maintaining good tablet aesthetics
A. B. İnan, N. Ekmekçiyan, D. Bexte, A. Altmeyer, R. Meier and C. Muehlenfeld

121. Evaluation of cushioning coatings on enteric pellets in MUPS tablets
L. Stein, S. Bauhuber, G. Warnke and J. H. Finke

122. Feeding of different hydroxypropyl cellulose powders
C. Köster and P. Kleinebudde

123. Feeding performance in continuous manufacturing
G. Birk, H.-L. Ohrem, M. Beretta, J. Kruisz and T. Hörmann-Kincses

124. Formation of delta-mannitol by co-spray drying to enhance tabletability of paracetamol-mannitol formulations
E. De Pauw, C. Vervaet and V. Vanhoorne

125. Formulation development and pharmacokinetic, toxicological and clincial batch production without tech transfer
E. De Coninck, L. Vandevivere, L. De Smet and F. Van der Gucht

126. GMP compliant manufacturing of a nanoparticulate imiquimod semi solid emulsion gel formulation (IMI-Gel) as an Investigational Medicinal Product (IMP) in a phase I clinical trial
J. Pielenhofer, S. L. Meiser, P. Staubach-Renz, M. Radsak and P. Langguth

127. Impact of excipients and seeding on solid-state form transformation of indomethacin during liquid antisolvent (las) precipitation
M. Silva, A. Kumar, K. Hodnett, R. Holm, L. Tajber and S. Hudson

128. Impact of intra-tablet blend homogeneity on the performance of tablets
A. Kottlan, A. Zirkl, B. Glasser and J. Khinast

129. In-die / Out-of-die verification of the Midoux number for roll compaction
M. Lück and P. Kleinebudde

130. Influence of intrinsic viscosity of povidone on granule and tablet properties after high shear wet granulation
M. Işık, A. İnan, N. Ekmekçiyan, F. El-Saleh and C. Muehlenfeld

131. Influence of Lubrication on Orodispersible Tablets and Minitablets
J. Kuck and J. Breitkreutz

132. Influence of rheological behavior of lactose powders on the weight consistency of tablets
A. Neveu, P. Janssen and F. Francqui

133. Influence of temperature on the tableting behavior of a binary mixture
H. Plappert and P. Kleinebudde

134. Influence of the molecular weight and substitution type of hypromellose on its ability to stabilize QESD crystallizations
J. Hansen and P. Kleinebudde

135. Influence of the plastic component content on tablet microstructure and dissolution
S. Römerová, O. Dammer and P. Zámostný

136. Investigation of powder rheology parameters relevant to tableting for Avicel® Microcrystalline Cellulose Excipients
M. Brackhagen, H. Feldmann and J. Hillmann

137. Manufacturing of implantable devices for sustained drug delivery using 3D-Printing
E. Larrañeta, C. J. Picco and R. F. Donnelly

138. Nifedipine dissolution rate imporovement using supercritical carbon dioxide RESS and SAS process
T. Massias, S. De Paiva Lacerda, J.-J. Letourneau, J. Resende de Azevedo, M.-A. Bolzinger and F. Espitalier

139. Overcoming challenges to formulate enteric oral dosage forms containing niclosamide amorphous solid dispersion
M. Jara, Z. Warnken, S. Sahakijpijarn, R. Thakkar, J. Koleng and R. Williams III

140. Powder flow evaluation of meloxicam binary mixtures using the energy to break an avalanche
J. Brokešová, A. Niederquell, M. Kuentz and Z. Šklubalová

141. Preparation of Solid Crystalline Suspensions by Electrostatic Particle Separation
A. Justen, C. Kurth, G. Schaldach and M. Thommes

142. Probabilistic Modelling of the Hydrodynamic Properties of a Bioreactor for mAb Production
U. Kaya, S. Gopireddy, N. Urbanetz, I. Nopens and J. Verwaeren

143. Process Variations for Spray Drying with a Coaxial Three-Fluid Nozzle
C. Corell, S. Seyferth, D. Fischer and H. Schiffter

144. Product temperature control via thermal imaging during continuous freeze-drying of pharmaceutical unit doses
P.-J. Van Bockstal, T. De Beer, J. Corver and J. Van Hauwermeiren

145. Spray drying of amorphous solid dispersions (ASDs): small scale screening of batches containing less than 50 mg API
L. Van Huylenbroeck, L. Vandevivere, E. De Coninck, L. De Smet and F. Van der Gucht

146. Spray Drying with a Coaxial Three-Fluid Nozzle for In-Situ-Precipitation of Inorganic Microparticles to Incorporate Poorly Water Soluble Drugs
C. Corell, S. Seyferth, D. Fischer and H. Schiffter

147. Spray-dried lipid-microparticles for delivery of antibiotics
C. Corzo, D. Crvenjak, S. Reyer, D. Lochmann, A. Zimmer and S. Salar-Behzadi

148. Sum of Amplitudes Analysis in Frequency Domain of Bulk Solid Dosing Processes
S. Klinken and J. Quodbach

149. Systematic evaluation of microwave-assisted freeze-drying of antibody formulations
N. Härdter, R. Geidobler, I. Presser and G. Winter

150. The beneficial properties of feeding isomalt powder
M. Beretta, V. Magosi, J. Kruisz, O. Luhn, S. Rendl, J. Kastner, M. Spörk and A. Paudel

151. The dissolution of albendazole and felodipine from Kollidon VA64® and Soluplus® based amorphous solid dispersions
J. Yang, V. Mohylyuk and G. P. Andrews

152. The effect of humidity on tablet surfaces containing different types of superdisintegrants
S. Bauhuber and G. Warnke

153. The effect of particle size on the sublimation of butyhydroxytoluene in tablets.
M. Decorte, B. Van Hove, F.-M. Preda, E. Verheyen, N. Moazami Goudarzi, M. Boone, C. Vervaet and V. Vanhoorne

154. The Effect of Tamping Force on Bi-Layer Tablet Robustness
S. Wetzel, T. Götz, C. Schuster and G. Warnke

155. The power of modeling freezing processes for vaccines
T. Cui, E. de Jong, J. Groenewold, J. van de Laar, E. van Deventer-Troost, V. Brinks and S. Pereira Lopes

156. The role of lubrication on the mitigation of powder tribo-charging: a comparative study with magnesium stearate and stearic acid
M. Beretta, S. Özer, J. T. Pinto and A. Paudel

157. Upscaling of external lubrication from a compaction simulator to a rotary tablet press
C. de Backere, V. Vanhoorne, T. De Beer and C. Vervaet

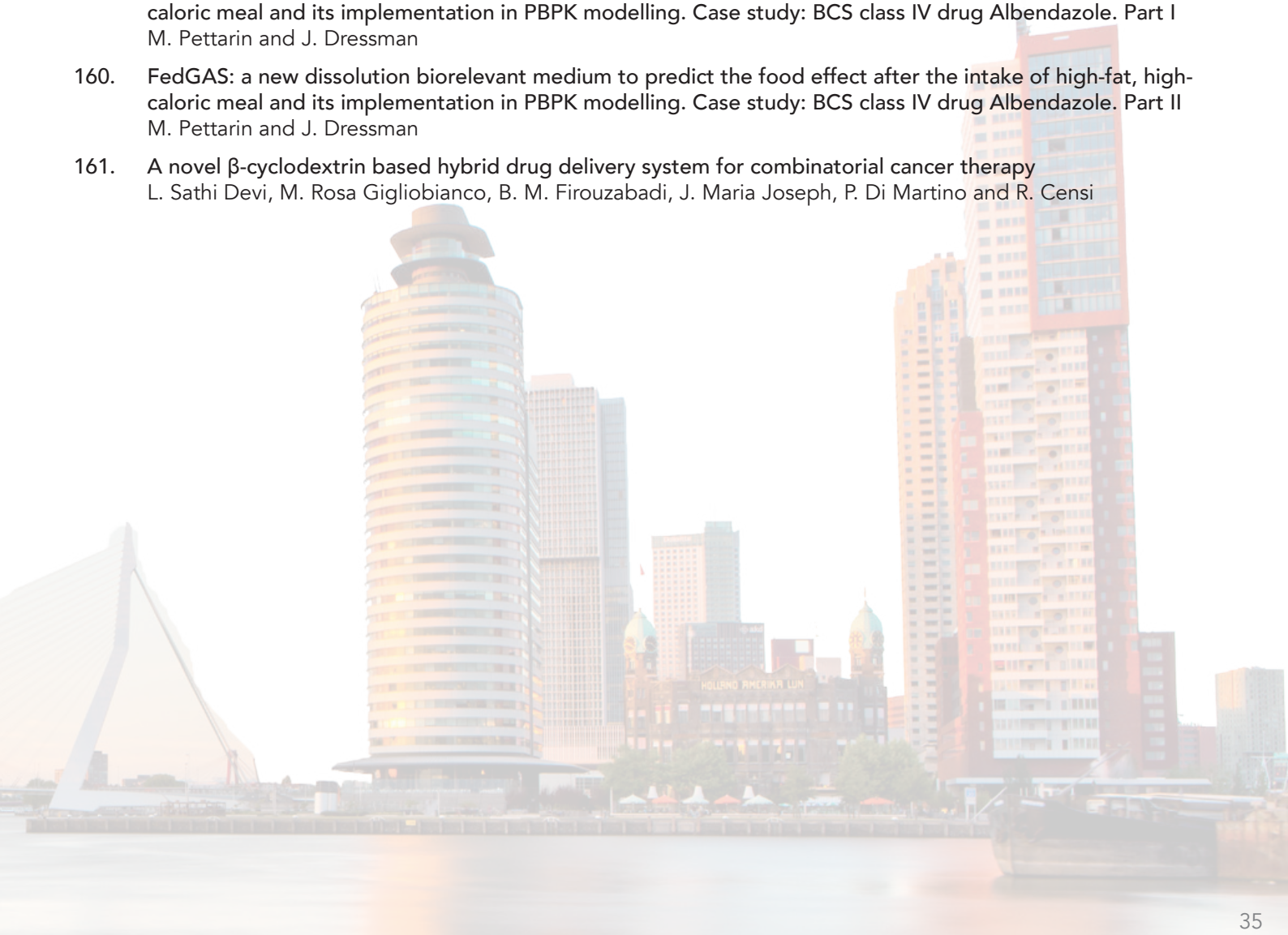
158. Visualization of the powder mixing behavior in a rotary tablet press
L. De Souter, M. Alizadeh Behjani, B. Joseph Nitert, L. Li, C. Wu and T. De Beer

Miscellaneous

159. FedGAS: a new dissolution biorelevant medium to predict the food effect after the intake of high-fat, high-caloric meal and its implementation in PBPK modelling. Case study: BCS class IV drug Albendazole. Part I
M. Pettarin and J. Dressman

160. FedGAS: a new dissolution biorelevant medium to predict the food effect after the intake of high-fat, high-caloric meal and its implementation in PBPK modelling. Case study: BCS class IV drug Albendazole. Part II
M. Pettarin and J. Dressman

161. A novel β-cyclodextrin based hybrid drug delivery system for combinatorial cancer therapy
L. Sathi Devi, M. Rosa Gigliobianco, B. M. Firouzabadi, J. Maria Joseph, P. Di Martino and R. Censi



Poster session on Thursday, 31 March 2022

Continuously exhibited from 09:00 to 17:00 h, with special presentations by authors from 11:00 to 11:30 h and 13:00 to 15:00 h. The number indicates the poster panel number.

Advanced drug delivery

01. 3D printed infliximab suppositories for the treatment of severe steroid-refractory ulcerative colitis
A. Awad, A. Goyanes, M. Orlu, S. Gaisford and A. W. Basit

02. 3D Printed Praziquantel Formulations via Direct Powder Extrusion for the Treatment of Schistosomiasis
J. Boniatti, P. Januskaite, L. B. d. Fonseca, A. L. Viçosa, F. C. Amendoeira, C. Tuleu, A. W. Basit, A. Goyanes and M.-I. Ré

03. A novel method to microencapsulate live probiotics for GALT activation
P. Rosas-Val, A. Brotons-Canto, J. M. Irache and C. Gamazo

04. Amphiphilic cyclodextrin nanoparticles for delivery of poorly soluble drugs
F. Brettner, J. Schreiner, S. Vogel-Kindgen and M. Windbergs

05. An innovative formulation of nanobubbles useful for ultrasound-assisted diagnostics and therapy
P. N. Hanieh, F. Rinaldi, A. Bettucci, E. Del Favero, L. Cantù, R. Marotta, C. Moran, C. Marianecci and M. Carafa

06. Anti-inflammatory and antimicrobial efficacy of electrospun nanofiber films for intracanal drug delivery
K. Chachlioutaki, C. Karavasili, E. Adamoudi, O. L. Katsamenis, A. Bakopoulou and D. G. Fatouros

07. Anticancer solid lipid nanoparticles (SLN) design to overcome multi-drug resistance in triple negative breast cancer
G. Chindamo, E. Peira, D. Chirio, S. Sapino, C. Riganti and M. Gallarate

08. Application of activated whey protein as a novel film forming agent in orodispersible drug-loaded films and nanofiber mats
U. Paaver, L. Tšurubrova, A. Allik, I. Laidmäe, A. Meos, J. Aruväli and J. Heinämäki

09. Behavior of single ibuprofen-loaded PLGA microparticles prepared via a microfluidics or a standard emulsification method
L.-A. Lefol, J. Vérin, F. Siepmann and J. Siepmann

10. Berberine loaded Microfluidics liposomes show in vitro anticancer activity
S. Khorshid, M. Tiboni and L. Casettari

11. Bioadhesive sustained-release drug delivery system for the prevention of intimal hyperplasia
T. Melnik, S. Ben Ameur, O. Jordan and F. Delie

12. Biopolymer nanocarriers for the controlled release of growth factors within a 3D scaffold for tissue engineering
E. P. Lamparelli and G. Della Porta

13. Budesonide-loaded microspheres for colonic-specific delivery by time, pH, and enzymatic trigger: a new formulation for paediatric age
V. D'Amico, I. Arduino, V. Laquintana, A. Cutrignelli, A. Spennacchio, A. Lopalco, M. Franco, N. Denora and A. A. Lopedota

14. Casting, spinning, foaming or printing? Meeting the challenge of ODT and buccal drug delivery through PVA based formulations
M. Kozakiewicz-Latała, A. Dyba, B. Karolewicz and K. Nartowski

15. Cellular uptake and trafficking of protamine-oligonucleotide nanoparticles as delivery systems for miRNA
I. Ruseska, F. Falsone and A. Zimmer

16. Developing guanidylated chitosan-TPP nanogels as a drug carrier for intrapericardial delivery
H. M. K. Ho, R. M. Day and D. Q. Craig

17. Development of amphotericin B nanocrystals loaded into dissolving microneedle array patches for the treatment of leishmaniasis
J. Wang, Y. Li, A. Paredes and R. Donnelly

18. Development of PLGA submicrometric particles by Prilling technique
C. De Soricellis, R. P. Aquino, P. Russo and P. Del Gaudio

19. Development of supersaturated semi solid self-nanoemulsifying drug delivery system (S-sSNEDDS)
T. Zhao and L. Mao

20. Dissolving microneedle array for the controlled dermal release of Rose Bengal loaded transferosomes
S. Demartis, F. Volpe-Zanutto, A. J. Paredes, L. K. Vora, S. A. Jahan, G. Rassu, E. Gavini and R. F. Donnelly

21. Dissolving microneedles containing salicylic acid nanosuspensions for the treatment of psoriasis
X. Dai, L. Vora, A. J. Paredes and R. F. Donnelly

22. Drug-loaded collagen-silica scaffolds for bone tissue engineering
A. Skwira, A. Szewczyk, M. Wekwejt and M. Prokopowicz

23. Electrospun fibers as solid eye drops – ocular drug delivery rethought
F. Rohde, M. Walther, J. Wächter, N. Knetzger, C. Lotz and M. Windbergs

24. Enzyme-loaded solid lipid nanoparticles produced by microfluidic technique as novel brain delivery systems of biologically active molecules
F. Sommonte, I. Arduino, A. A. Lopedota, A. Lopalco, V. Laquintana, A. Cutrignelli, M. Tiboni, N. Denora, P. Decuzzi and M. Di Francesco

25. Formulation of cell-membrane based nanoparticles and extracellular vesicles in microneedles for easier delivery and long-term stability
C. D'Amico, F. Fontana, N. El-Sayed and H. A. Santos

26. Formulation of siRNA loaded liposomes to treat the pro-inflammatory response in sepsis
Q. Wang, Y. Louaguenouni, H. Hillaireau, J. Vergnaud, F. Fay and E. Fattal

27. Gold Nanostars Loaded-Dissolving Microneedles for Photothermal Therapy of Skin Cancer
N. El-Sayed, K. El-Badry and H. Santos

28. Hyaluronan-nanofibres conjugates for cationic drug delivery
M. Rysová, H. Tománková, Š. Hauzerová, M. Schaabová, V. Novotný and L. Martinová

29. Hyaluronic Acid Nanogel for Drug Delivery System
T. Katsumata, K. Fukumoto, K. Yabuuchi, Y. Nakagawa, S. Aso, Y. Tahara and T. Shimoboji

30. Hyaluronic Acid Nanogel for Protein Delivery System and Vaccine Application
T. Katsumata, K. Fukumoto, Y. Nariai, T. Urano, R. Miura, S. Sawada, K. Akiyoshi, K. Morita, H. Shiku and T. Shimoboji

31. Ibuprofen-loaded PLGA microparticles: Swelling and drug release in bulk fluids vs. agarose gels
L.-A. Lefol, J. Vérin, F. Siepmann and J. Siepmann

32. Implementation of the QbD concept in the development of lipobeads loaded with gemcitabine
C.-I. Barbălată, A. S. Porfire, L. R. Tefas, L. Vlase and I. Tomuță

33. In situ forming GMO-cubic phase for ocular delivery of Acyclovir
M. Tarsitano, A. Mancuso, M. C. Cristiano, M. Fresta and D. Paolino

34. In vitro assessment of the synergistic combination of cannabidiol with DNA-alkylating agents for glioblastoma multiforme
A. Brookes, D. Scurr, M. Alexander, P. Gershkovich and T. Bradshaw

35. Injectable Photoactive Hemostatic Farsi Gum-Alginate Hydrogel Developed via Metal Coordination Chemistry
K. Musaie, S. Abbaszadeh, V. Nosrati Siahmazgi, M.-R. Eskandari, H. Almeida Santos and M.-A. Shahbazi

36. Injectable Photothermal Antibacterial Hydrogel Incorporated with CuO Nanosheets for Skin-Tumor Therapy and Wound Healing
V. Nosrati, S. Abbaszadeh, K. Musaie, M.-R. Eskandari, H. Almeida Santos and M.-A. Shahbazi

37. Inkjet Printing for Personalized Administration of Itraconazole Nanosuspensions on Contact Lenses
C. Tetyczka, K. Brisberger, M. Zettl, R. Jeitler, G. Leitinger, C. Winter and E. Roblegg

38. Interactions of hesperidin and hesperetin with HP-□-CD: comparison of inclusion complexes
K. Wdowiak, N. Rosiak, E. Tykarska and J. Cielecka-Piontek

39. Investigation of adsorption of dexamethasone solutions to polylactide cuboids produced by 3d printing
M. Ulbricht, J. Klemm, P. Schick, W. Weitschies and A. Seidlitz

40. Lipid porphyrin nano assembles as potent PDT & PTT agents for the treatment of bacterial biofilms.
P. Cressey, L.-G. Bronstein, R. Benmahmoudi, V. Rosilio, C. Regeard and A. Makky

41. Liposome prepared by different mixing modules and effect on prefiltration
J. Li, L. Mao, L. Tian, Y. Gu, Y. Zhang and J. Chen

42. Lymphocyte proliferation assay for safer nanofiber delivery systems
A. Zidar, N. Ajlec, Š. Zupančič, M. Jeras and J. Kristl

43. Mesoporous silica-based bifunctional bone drug delivery systems
M. Prokopowicz, A. Szewczyk and A. Skwira

44. Methyl-β-cyclodextrin quaternary ammonium chitosan conjugate as vehicle for oral administration of bergamot essential oil
L. Cerri, A. Fabiano, B. Grassiri, A. M. Piras and Y. Zambito

45. Microfluidic assisted preparation of dual targeting polymeric micelles for photodynamic prostate cancer therapy
G. F. Racaniello, I. Arduino, R. M. Iacobazzi, V. Laquintana, A. Lopedota, A. Lopalco, A. Cutrignelli, A. Azzariti, B. C. Lee and N. Denora

46. Microneedle assisted delivery of dexamethasone and dexamethasone sodium phosphate
M. Li, L. Vora, K. Peng and R. Donnelly

47. Microspheres with ultrahigh mass fraction of therapeutics inspired by pomegranate
W. Li, J. Chen, H. Santos, J. Fan and D. Liu

48. Microstructured Lipid Carriers (MLCs) based on chitosan and N-acetylcysteine for lung deposition
M. Guerini, G. Condrò and P. Perugini

49. Mucoadhesion for Enhanced Drug Delivery
E. Draganoiu, P. Balcerzak and L. Miinea

50. NGIWY-amide: A Bioinspired Ultrashort Self-Assembled Peptide Gelator for Local Drug Delivery Applications
N. Theodoroula, C. Karavasili, A.-T. Chatzitaki, C. Petrou, M. Vlasiou, I. Sarigiannis, I. S. Vizirianakis and D. G. Fatouros

51. One-pot synthesized bioglass as an excipient in pelletization process of bone drug delivery systems
A. Szewczyk, A. Skwira and M. Prokopowicz

52. Optimization of a PEGylated linker for the development of potent antibody-drug conjugates
T. Tedeschini, C. Benedetta, L. Cannella, D. Gabbia, Y. Matsuno, A. Suzuki, H. Yoshioka, S. De Martin and G. Pasut

53. Porous cellulose acetate microneedles for therapeutic drug and disease monitoring
U. Detamornrat and R. Donnelly

54. Preparation and characterization of intraperitoneal sustained-release oxaliplatin-loaded multi-vesicular liposomal depot for colorectal cancer treatment
J. J. Lee, S. M. Abuzar, E. J. Park, Y. Seo, J. Lee, S. H. Baik and S.-J. Hwang

55. Preparation and evaluation of melatonin-cyclodextrins complex for granular corneal dystrophy type 2
T.-Y. Jang, J.-H. A. Ahn, H.-D. Kim, S.-M. Abuzar, J.-Y. Lee, S.-E. Jin, E. K. Kim and S.-J. Hwang

56. Production of self-dispersible lipid pellets by prilling
J. Pfeifer, D. Steiner and H. Bunjes

57. Silica nanoparticles as platform for a HIV-1 vaccine
C. Barbey, D. Peterhoff, R. Wagner and M. Breunig

58. Solid self-nanoemulsifying drug delivery system (S-SNEDDS) for solubility enhancement prepared by hot melt extrusion using a novel amino methacrylate copolymer
F.-P. Schmied, A. Bernhardt and S. Klein

59. Sonosensitive Nanocapsules: An Emerging Non-Invasive Method for Local Drug Release
U. Savšek, B. George, S. J. Rupitsch, H. Ermert, G. Lee and D. Fischer

60. Stress relieving: printing custom-made cortisol for patients with adrenal insufficiency.
S. Ayyoubi, W. Meulenhoff, E. Wilms, E. Muller and L. Ruijgrok

61. Targeted self-emulsifying drug delivery systems for restoring docetaxel cytotoxicity in chemoresistant tumors.
V. Campani, I. C. Salaroglio, V. Nele, J. Kopecka, A. Bernkop-Schnürch, C. Riganti and G. De Rosa

62. Targeting dolutrgravir to mesenteric lymph nodes (MLNs) by lipophilic prodrug approach for improved treatment of HIV/AIDS
Y. Chu, A. Wong, P. Gershkovich and M. Stocks

63. The Dispersome® technology: Next generation in amorphous stabilization and solubility enhancement
D. Leng, B. Bulduk and K. Löbmann

64. The use of electrospraying as a means of drug loading into mesoporous silica particles for enhanced dissolution
C. Volitaki, A. Lewis, A. Buanz and D. Craig

65. Towards a single-step production of solid lipid based formulations by hot-melt extrusion
A. Schulzen and J. Quodbach

66. TPCS2a delivery in mesenchymal stem cell membrane-coated PLGA nanoparticles for targeted photodynamic therapy
G. Avancini, L. Menilli, E. Reddi, F. Mastrotto and F. Moret

67. Utilizing pH Modification in Hot Melt Extrusion to Increase Drug Loading of Telmisartan Amorphous Solid Dispersions
S. Thompson, D. Davis, C. Moon and R. Williams III

Advances therapy medicinal products

68. Canine mesenchymal Lyosecretome production and clinical use in osteoarthritic dogs
M. Mocchi, E. Bari, S. Dotti, R. Villa, P. Berni, V. Conti, M. Del Bue, G. P. Squassino, L. Segale and R. Ramoni

69. Engineered Shape Memory Polymers Nanofibers for Neural tube defects repair.
S. Pisani, S. Croce, V. Calcaterra, R. Dorati, I. Genta, M. A. Avanzini and B. Conti

70. Generic Project Management Plan for Cell and Gene Therapy (CGT) products from Greenfield to Manufacturing License
C. Papewalis, B. Düthorn and H.-G. Eckert

71. Osteoinductive and osteoconductive properties of 3D Printed scaffolds containing Mesenchymal Stem/Stromal Lyosecretome
E. Bari, F. Scocozza, S. Perteghella, M. Sorlini, G. Loi, F. Auricchio, M. Conti and M. L. Torre

72. Osteoinductive and osteoconductive properties of Biohybrid Bovine Bone Matrix containing Mesenchymal Stem/Stromal Cell Lyosecretome
E. Bari, I. Roato, G. Perale, F. Rossi, T. Genova, F. Mussano, R. Ferracini, M. Sorlini, S. Perteghella and M. L. Torre

73. Osteoinductive and osteoconductive properties of titanium cages containing Mesenchymal Stem/Stromal Lyosecretome
E. Bari, S. Perteghella, M. Sorlini, D. Mandracchia, L. Giovannelli, M. L. Torre and L. Segale

Continuous manufacturing and PAT

74. Continuous manufacturing of modified release Metformin formulations using directly compressible HPMC, Part 1
D. Sieber, S. Trofimov, F. El Saleh, R. Meier and C. Muehlenfeld

75. Development of a simple, lab-scale continuous QESD crystallizer to increase production size
J. Hansen and P. Kleinebudde

76. Hyperspectral Imaging as PAT tool for the prediction of API content in functional coated pellets
A. Grave, O. Schewtschenko and F. Meuche

77. Optimization of a film coating formulation for high solid content application suitable for continuous manufacturing
S. Kreß, R. Janousek, R. Bastian, B. Grabherr and M. Kruse

78. PAT based quality control of powder blends in terms of API content and downstream processability for tableting
T. Casian, S. Iurian, D. Muntean, A. Gâvan, A. Porfire and I. Tomuță

79. Temperature profiles of the QbCon 1 during continuous drying
K. Kiricenko and P. Kleinebudde

In-vitro/In-vivo correlations

80. Establishing in vitro-in vivo correlation of amorphous solid dispersions
J. Jørgensen, W. Mohr, M. Rischer, A. Sauer, S. Mistry, T. Rades and A. Müllertz

81. In Vitro - in Vivo in Mini Scale – Enabling Formulations for Corallopyronin A
T. Becker, A. K. Krome, A. Schiefer, K. Pfarr, T. Aden, M. P. Hübner, S. Kehraus, G. M. König, A. Hoerauf and K. G. Wagner

82. Polycationic Oligomers as Lead Structures for new Anti-Infectives for the Treatment of Acanthamoeba Keratitis
T. Rimkus and S. Reichl

83. Predicting food effects of Mucinex® 12hr using the dynamic gastric model (DGM)
M. M. Knopp, L. T. Hansen, R. Mirfattahi and A. Müllertz

84. Studying food effects of Cataflam® (diclofenac potassium) using the dynamic gastric model (DGM)
M. M. Knopp, N. K. Kiil-Nielsen, L. T. Hansen and A. Müllertz

Parenteral delivery

85. Development of a chemically-selective analysis approach for live organoid cultures in preclinical testing
N. Jung, T. Moreth, F. Pampaloni, E. H. K. Stelzer and M. Windbergs

86. Implant prototype for rotator cuff tear treatment: Efficiency of TGF-β3 loading strategies and control of released dose
L. Berten-Schunk, H. Bunjes and H. Menzel

87. Long-term antioxidant stability of curcumin-loaded PEGylated nanoemulsions – the impact of oil phase selection
J. Đoković, J. Mitrović and S. Savić

88. Nucleation kinetics based solvent selection for bottom-up generation of long-acting injectable crystalline suspensions
S. Nandi, A. Collas, L. Padrela and L. Tajber

89. Preparation and forced degradation studies of drug-cyclodextrin water-soluble inclusion complexes using 2-hydroxypropyl-β-cyclodextrin and sulfobutylether-β-cyclodextrin
L. Ferreira, C. Cardoso and A. C. Paiva-Santos

Pediatric and geriatric drug delivery

90. Bitterness prediction using machine learning and chemical descriptors
G. De León, E. Fröhlich and S. Salar-Behzadi

91. Estimating in vivo dissolution of two poorly soluble drugs in fasting and fed children - why not to rely on adult in vitro models
L. Freerks, T. Arien, C. Mackie, S. Inghelbrecht and S. Klein

92. Machine learning predicts drug depletion by intestinal microbiota
A. Favaron, L. E. McCoubrey, S. Thomaidou, M. Elbadawi, S. Gaisford, A. Basit and M. Orlu

93. Melt-extrusion 3D printing of caffeine and flecainide tablets for personalized treatment of children.
E. E. van Kampen, B. Candir, L. Willemsteijn and E. J. Ruijgrok

94. Oral mixed micelles as promising solubilisation approach in paediatric drug delivery
F. Karkossa, L. Däumich and S. Klein

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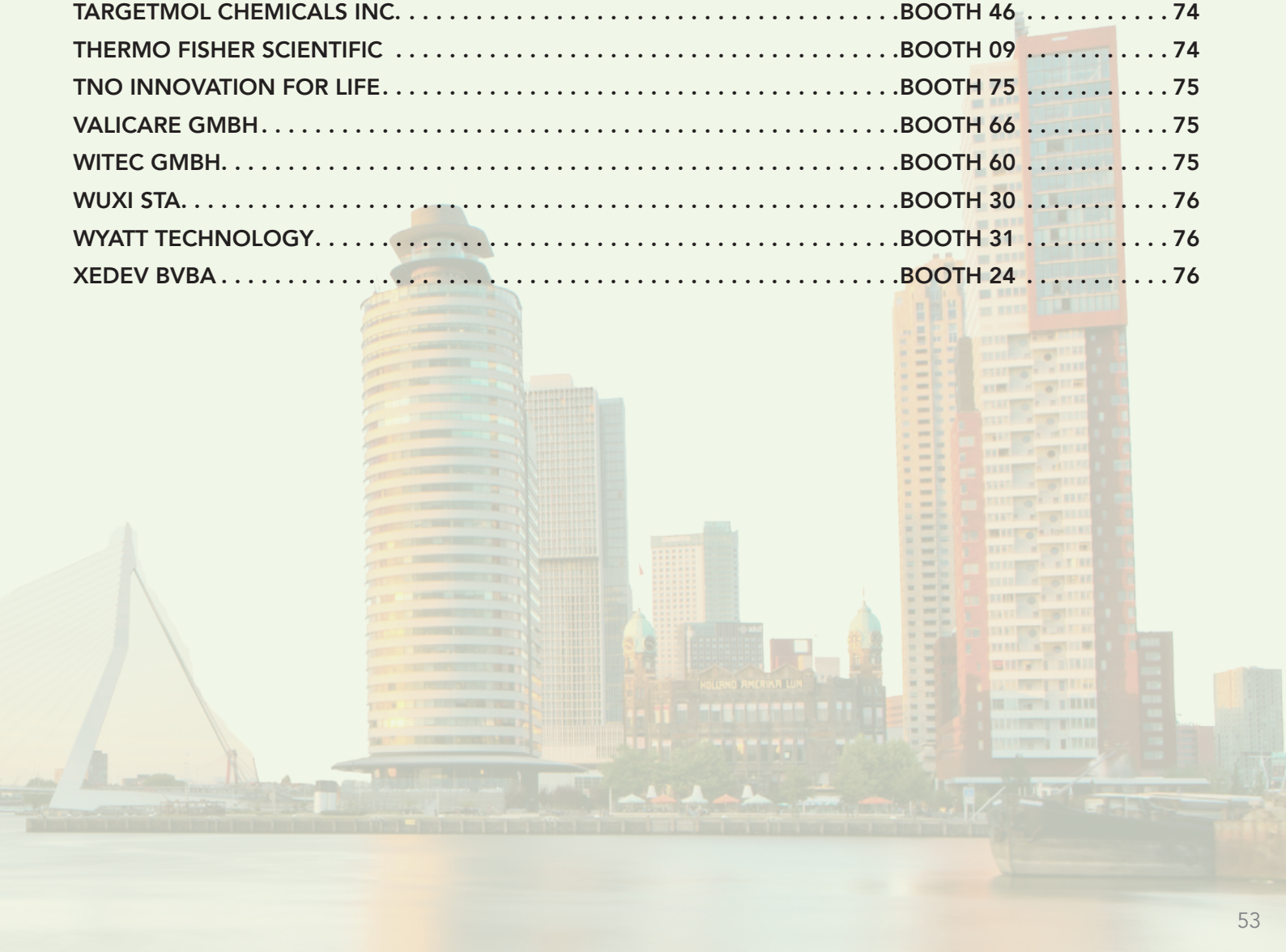

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www.colorcon.com

DFE PHARMA — BOOTH 48

DFE Pharma is a global leader in pharma- and nutraceutical excipient solutions. We develop, produce and supply the highest quality functional excipients for the pharmaceutical, biopharmaceutical and nutraceutical industries for respiratory, oral solid dose (OSD), ophthalmic and parenteral formulations, including COVID-19 vaccines and treatments.

Our excipients act as fillers, binders, disintegrants and active ingredients stabilizers. Since more than a century and with around 450 people worldwide, we serve over 5,000 customers in 100+ countries. Headquartered in Goch, Germany, we are committed to supporting (bio)pharmaceutical and nutraceutical companies, driven by our purpose: Your medicines, our solutions. Moving to a healthier world.

www.dfepharma.com

ENGINSOFT GMBH — BOOTH 41

EnginSoft is a premier consulting and software company in Simulation Based Engineering Science with global presence.

Through combination of engineering methodologies and numerical simulation tools, EnginSoft simulates and analyses geometry, product, assembly and production processes, thus enabling our customer to optimize their products and processes early on.

Our product portfolio and expertise include

- Mesh-free bulk simulation (Discrete Element Method for solid pharmaceuticals)
- Mesh-free particle based CFD simulation (Moving Particle Simulation for liquid/ semi-solid pharmaceuticals)
- Mechanical simulations (Multi-Flexible-Body-Dynamics Simulation, Statistical 3D Tolerance Simulation)
- Multi-parameter-optimization and simulation data management
- Webbased material data base

www.enginsoft.de

EVONIK INDUSTRIES AG — BOOTH 37

Evonik is one of the world's leading specialty chemical companies. Our broad, versatile portfolio of functional excipients, technologies and CDMO services for oral and parenteral dosage forms makes us a global leader for advanced drug delivery. We also serve as a global CDMO for small molecule APIs, HPAPIs and intermediates, and supply high-quality, innovative cell culture solutions and amino acids. Evonik operates a trusted global network of manufacturing sites, laboratories and development centers around the world. We have a track record of providing enabling solutions to more than 1,000 pharmaceutical, med-tech and nutraceutical customers worldwide, including 90% of the world's top life-science companies.

healthcare.evonik.com

THE FITZPATRICK COMPANY — BOOTH 15

The Fitzpatrick Company is a Unit of IDEX MPT, Inc.

The Fitzpatrick Company engineers, manufactures and markets high-performance dry granulation and particle size reduction equipment, including the FitzMill™ Comminutor for precise particle size reduction, and the CCS Series of roller compactors for dry granulation/powder agglomeration. Fitzpatrick provide fully scalable solutions, from lab/R&D to production, with repeatable and reproducible results.

Our in-depth process capabilities, world-class GMP designs and engineering skills ensure we supply equipment that meets the highest of expectations.

We offer more than just machines. We help design the ideal system to suit your specific needs.

www.fitzpatrick-mpt.com

FREUND-VECTOR CORPORATION — BOOTH 64

Primary markets served by Freund-Vector Corporation include the pharmaceutical, nutritional, chemical, cosmetic, confectionery and food industries.

The Freund-Vector product lines includes Coating Pan systems for applying an aqueous, solvent or sugar film coating; Fluid Bed systems for granulating, coating, spherinizing and drying; Roll Compactors for material densification and granulation; High Shear granulators for wet granulation and mixing; Spray Dryers for creating small particles along with Automated Process Control systems for all the equipment/ systems.

Our two laboratory facilities specialize in product feasibility, product development and process technologies to provide expertise to support marketing of all the product lines.

www.freund-vector.com

GAMLEN TABLETING LTD — BOOTH 44

Gamlen Tableting are the world leaders in powder compaction analysis.

Our unique range of instruments, exclusive accessories and express testing services give you a better understanding of how your powders will behave before full scale manufacture.

With the fully automated D-Series Compaction Analysis Suite, you can generate valuable USP <1062> compaction data in just minutes enabling you to launch to market faster, identify potential risks ahead of production, evaluate alternative suppliers, and troubleshoot issues occurring in production.

Accurate compaction data saves time, money and materials.

Make It Better. Make It Gamlen.

www.gamlentableting.com

GATTEFOSSÉ — BOOTH 43

Since 1880, Gattefossé develops innovative lipid excipients for oral solubilization, bioavailability enhancement, sustained release, lubrication, and taste-masking. We provide skin penetration enhancers and emulsifiers for improved topical formulations. Every product is designed with utmost attention to safety, quality, and performance consistency. As part of Gattefossé offer, technical and regulatory support is provided by fully trained experts to accelerate customers drug development programs.

www.gattefosse.com

GERTEIS MASCHINEN+PROCESSENGINEERING AG BOOTH 77

Gerteis, a Swiss manufacturer of advanced high-quality roller compactors, sets the standard in dry granulation in the pharamaceutical industry. The company's deep understanding of roller compaction, its precision in controlling process parameters and their superior mechanical designs supports pharmaceutical scientists for more than three decades.

www.gerteis.com

GRACE GMBH

BOOTH 59

Grace, built on talent, technology and trust, is a premier specialty chemicals company that provides innovative products, technologies and services that support pharmaceutical development and manufacturing. As a worldwide leader in specialty silica gel manufacturing, we offer unmatched quality and reproducibility of our fine chemicals, chromatography resins, formulationexcipients, and active ingredient delivery technologies. Our unyielding focus on innovation and advanced tehnical expertise are built upon a 100-year history of exceeding customer expectations at every phase of the drug development process, from discovery to commercialization.

www.grace.com

GUSTOCEUTICS

BOOTH 56

Gustoceutics provides a biosensor taste testing service to improve acceptability and compliance of medicines in the most vulnerable patient groups, particularly children and the elderly. Based at UCL School of Pharmacy, Professor Duncan Craig and Dr Hend Abdelhakim have worked together for a number of years developing and testing paediatric dosage froms, including in-vitro taste assessment studies of raw pharmaceutical entities as well as formulated dosage forms. The work they have undertaken has assisted companies to move forward with their medicine design and optimization, based on a rapid, quantitative assessment of both drug and formulation taste assessment.

www.gustoceutics.com

HARKE PHARMA

BOOTH 53

HARKE Pharma stands for more than 40 years of supporting our Customers in their development and optimization of innovative dosage forms, by offering extensive technical support, rounded up by a broad range of specialized excipients and selected APIs. By closely monitoring the ever-changing markets, we identify the latest technological and scientific trends, supporting our Customers to implement them. Our in-house experts are available to efficiently work with our Customers on projects.

www.harke.com/pharma

HARRO HÖFLIGER — BOOTH 29

Harro Höfliger specializes in the development of customer-oriented process and production solutions for pharmaceutical and medical applications as well as market-oriented consumer products. In addition to innovative machine platforms and packaging machines, customized turnkey system solutions for product assembly, processing of web materials, as well as dosing and inhalation technology are the company's core expertise.
The systematically structured portfolio of upscalable test machines and modules, as well as reqirement-oriented technology platforms, results from many years of experience and targeted research and development. Thus, Harro Höfliger covers all phases from the laboratory stage to high-performance production.

www.hoefliger.com

IFF PHARMA SOLUTIONS — BOOTH 67

IFF Pharma Solutions – Unmatched Insights Meet Unwavering Ingenuity

We are now part of IFF. You've known us for decades as the makers of Avicel® and METHOCEL™ and many other strong brands, and today we're building on that history while embracing a future of new possibilities. With decades of vital experience in the pharmaceutical industry, IFF Pharma Solutions team has a proven track record of working with customers around the globe to differentiate drug formulations and solve the toughest challenges. Couple that with a commitment to quality, and global manufacturing and regulatory expertise, we can apply our talent and technologies to enable your goals, delivering what is best for you, when you need it.

We offer a unique range of well-known excipients designed to deliver performance and cost advantages in various oral solid dosage forms. At IFF Pharma Solutions, our world thrives on balance. Expertise and innovation. Advancement and consistency. New growth and strong foundations. These elements are the ingredients for dependability and discovery — and they are what help us deliver the most essential pharmaceutical, dietary supplement and industrial polymer solutions in the industry.

www.iff.com

INGREDIENTPHARM — BOOTH 12

INGREDIENT PHARM is specialized in the development and marketing of niche pharmaceutical excipients for solid dosage form with a strong expertise in controlled release and taste masking applications. Within API we focus on taste masking and production performance using innovative formulation and technology approaches. Ingredient Pharm is a Swiss based company and acts internationally. We do not offer products only but also complete solutions to support your product development and production.
GLATT is your exceptional partner for integrated process solutions for developing, processing and manufacturing powder solids. Develop powerful technologies, roll out innovative ideas, share our cumulative expertise worldwide – that is our mission. With integral solutions to make your business a success. As a pioneer in fluidized bed technology, we are now the partner to companies in the pharmaceutical, food, animal feed and fine chemicals industries. Glatt offers a unique portfolio of innovative products and extensive services to support your company across the entire process chain, including process development for new products and formulations, process technology, planning, right up to construction of the plant itself to manufacture your product.Benefit from quality, turn-key solutions from one source!

www.glatt.com

INPROCESS-LSP

BOOTH 45

InProcess-LSP is a highly innovative organization providing full Process Analytical Technology (PAT) method and instrument development services.

Being experts in nanoparticle size characterization, they are the inventors of the NanoFlowSizer: a unique, non-invasive nanoparticle size instrumentation for real-time measurement.

The NanoFlowSizer thanks it's unique properties of being the only instrument capable of measuring particle size and size distribution of turbid nanosuspensions in flow, without the need for sample treatment or dilution.With the NanoFlowSizer, nanoparticle sizing takes place within 10s, enabling continuous real-time in flow analysis.

The InProcess-LSP team has great experience in PAT science and in process and product development.

www.inprocess-lsp.com

INTERREG SITE DRUG

BOOTH 56

The INTERREG 2 Seas project "Site-Specific Drug Delivery" aims at developing innovative site-specific drug delivery systems for the colon, inner ear, peritoneal cavity and breast. Medical treatments for Crohn's disease, deafness and metastases in the peritoneal cavity are to be improved and breast reconstruction is to be facilitated.

Consortium partners: Universities of Lille (Prof. Siepmann), Cambridge (Prof. Zeitler), Ghent (Prof. Vervaet), London (Prof. Basit), Leiden (Prof. Bussmann), Delft (Prof. Zadpoor), Lille University Hospital, Lattice Medical and Prodigest.

This project is funded by the Interreg 2 Seas programme 2014-2020 and the European Regional Development Fund under subsidy contract Site Drug 2S07033.

www.site-drug.org

INVITE GMBH

BOOTH 52

INVITE is investing in the future. INVITE thinks outside the box. We bring research and practice together under one roof in an open innovation platform. As a research joint venture between TU Dortmund University, Heinrich-Heine-University Düsseldorf and BAYER AG, we deliver powerful ideas for sustainability and ecology in the chemical, pharmaceutical and biotechnology industries.
Furthermore, INVITE leads the Drug Delivery Innovation Center (DDIC) which is an open consortium that brings together partners from pharmaceutical industry, equipment and excipient manufacturers. Having started in 2017, we bridge basic research and industry applications in a highly integrated and interdisciplinary approach.

www.invite-research.com

JRS PHARMA GMBH — BOOTH 63

JRS Pharma is a leading manufacturer of excipients and coatings, offering a complete portfolio of solutions for the global health science industry. Their excipients portfolio includes: high functionality excipients, binders, disintegrants, lubricants, functional fillers, thickeners, stabilizers, carriers, and coatings. In addition to their wide range of excipients, they offer excellent technical support to address the needs and formulation challenges of their customers. Our experts are at your disposal at the poster session where we display our posters.

www.jrspharma.com

KERRY — BOOTH 25

For more than 75 years, Kerry has earned its reputation as a successful world-class pharmaceutical supplier that demonstrates excellence in consistent, high-yielding, customer-specific solutions for the biotech, pharmaceutical, and nutrition markets.

We bring together our superior products with new innovative solutions and market-driving alternatives such as pharmaceutical grade lactose excipients, film coating, self-lubricating excipients, tableting systems, and flavors to help our customers succeed in today's challenging global marketplace.

We have the worldwide resources and global technical platform to deliver consistent, high quality products backed by unparalleled service, technical support and formulation customization capabilities

www.kerry.com/pharma

KORSCH AG — BOOTH 14

KORSCH The Specialist. Specialization is the key. Since 1919, KORSCH has focused on its core competency of tablet compression technology. This focus and resulting experience base is the foundation for the broadest and most innovative product line for tablet compression technology. KORSCH offers an optimal solution for virtually every tablet compression application - through initial feasibility, research, scale-up, clinical production, and full scale 24/7 production. KORSCH presses are used successfully all over the world and are supported by a global network of sales and technical service specialists.

www.korsch.com

L.B. BOHLE MASCHINEN UND VERFAHREN GMBH BOOTH 54

L.B. Bohle with the headquarter in Germany, is one of the largest system suppliers for the pharmaceutical processing industry and related sectors. Internationally active, we focus on machinery and equipment as well as process technology and components.

In addition, L.B. Bohle offer sustainable solutions for demanding production processes in batch and continuous manufacturing.

Our products provide added value for your production. We have the optimal machine for your process, from weighing, to wet and dry granulation, grinding and sieving, blending, tablet coating, tablet checking through to product handling.

www.lbbohle.com

LIPOID GMBH BOOTH 39

Lipoid – We Invest in Quality

The Ludwigshafen-based Lipoid Group is the world's only supplier to produce a complete range of high-purity natural, hydrogenated, and synthetic phospholipids. As a global player with close to 500 employees and a world-wide distribution organization, the Lipoid Group has become world leader in the field of phospholipids for pharmaceutical applications.
Lipoid's phospholipids provide an essential basis for sophisticated drug delivery systems, such as emulsions, liposomes, mixed micelles, and lipid nanoparticles, particularly for parenteral applications. These systems play a crucial role, for example, in tumor therapeutics and drugs for inhalation.
Moreover, Lipoid's products are also components in many vaccine systems. Of particular current prominence is Lipoid's contribution to Covid-19 mRNA vaccines and vaccines containing adjuvants.
In addition, phospholipids from Lipoid have applications in dietary supplements and in high-quality cosmetic products.

www.lipoid.com

LONZA SMALL MOLECULES BOOTH 79

At Lonza Small Molecules, our connected experts work together to provide contract development and manufacturing services, helping pharma and small biotech companies deliver their medicines to patients in need. From the earliest stages of discovery to the final drug product, we can simplify your outsourcing experience with our reliable, timely service, anticipating risks and solving problems.

Whether you are developing a pioneering therapy or creating a new oral solid dosage form, Lonza is the only CDMO partner you need. Throughout your molecule's journey from early development to commercial product, we work as one.

pharma.lonza.com

LTS LOHMANN THERAPIE-SYSTEME AG BOOTH 69

LTS Lohmann Therapie-Systeme AG is a leading pharmaceutical technology company that develops and manufactures innovative drug delivery systems such as Transdermal Patches ("TTS") and Oral Thin Films ("OTF") for the pharmaceutical industry. LTS´ commercial offering encompasses more than 20 marketed products and a diverse pipeline of more than 30 development projects targeting multiple disease indications.

LTS's innovation pipeline contains both partner-funded as well as proprietary, LTS-funded projects. LTS maintains its leading position through the continuous refinement of its core TTS and OTF technologies and by advancing emerging drug delivery technologies, including Micro Array Patches (MAP) for the intradermal delivery of large molecule, biological actives. LTS has an established dedicated State-of-the-Art R&D Center for parenteral and sterile MAP technology platform including a GMP area for manufacturing of clinical supplies.

Founded in 1984, LTS operates today from two sites in Andernach, Germany and West Caldwell, NJ, USA and a representative office in Shanghai, China.

www.ltslohmann.com

LUBRIZOL LIFE SCIENCE BOOTH 73

The Health business of Lubrizol Life Science (LLS) is a preferred Contract Development and Manufacturing Organization (CDMO) for complex pharmaceuticals and innovative medical devices.
When you partner with LLS Health, you benefit from working with us at every stage in the development process. We specialize in helping clients from idea to execution by offering innovative polymers and excipients, product development including drug-eluting devices, and best-in-class contract manufacturing services. Our long history of polymer expertise and continued investment in research and manufacturing, means we offer you and your customers a smooth and streamlined approach to innovative healthcare solutions.
Our pharmaceutical grade carbomers, polycarbophils, and thermoplastic polyurethanes are used in a wide range of applications including sustained release oral solid dosage forms, semisolid and liquid formulations, transdermal applications and drug eluting device solutions. Our Carbopol®, Pemulen™, and Noveon® polymers have been successfully used in over-the-counter and pharmaceutical formulations to impart rheology modification, mucoadhesion, controlled drug release, and many other unique properties.
As a CDMO, we excel in the formulation and manufacturing of complex drug products, including insoluble compounds, long-acting injectables/implantables, sterile products, highly potent APIs, and controlled substances.
www.lubrizol.com/Health/Pharmaceuticals

MDPI PHARMACEUTICS BOOTH 78

Pharmaceutics is a peer-reviewed, open access journal on the science and technology of pharmaceutics and biopharmaceutics, and is published monthly online by MDPI. It is indexed within Scopus, SCIE (Web of Science, IF 6.321, ranks 29/276 (Q1) in the WoS category „Pharmacology & Pharmacy"), PubMed, PMC, Embase, CAPlus / SciFinder, and many other databases.

www.mdpi.com/journal/pharmaceutics

Biomedicines (ISSN 2227-9059) is an open access journal devoted to all aspects of research on human health and disease, the discovery and characterization of new therapeutic targets, therapeutic strategies, and research of naturally driven biomedicines, pharmaceuticals, and biopharmaceutical products.

www.mdpi.com/journal/biomedicines

MEDELPHARM

BOOTH 14

About MEDELPHARM

Founded in 1985 in Lyon, France, MEDELPHARM has over 35 years of experience in the tableting sector. Among other initiatives, the precision engineering company designs and manufactures research & development compaction simulators like the renowned STYL'One Evo and STYL'One Nano Benchtop Model and provides innovative solutions for powder analysis and formulation support.

Staffed by a dedicated team of scientists and technicians, the MEDELPHARM Science Lab performs trials with predictive results and supports its customers with formulation and powder characterization challenges. In addition, MEDELPHARM Distribution also represents a range of solutions in powder processing, from R&D to production.

For more information, visit:

www.medelpharm.com

MEGGLE

BOOTH 28

MEGGLE - Experts in Excipients

MEGGLE Excipients & Technology is a global leader in manufacturing lactose for the pharmaceutical industry. We offer a broad product portfolio of lactose excipients, co-processed technologies and excipient contract manufacturing.

MEGGLE is a pioneer in co-processing technologies and developed highly functional excipients possessing unique qualities for directly compressible immediate and sustained release pharmaceutical solid dosage forms.

- Products: Lactose monohydrate, Anhydrous Lactose, Co-Processed Excipients, Lactose for Inhalation, Lactose for lyophilization and parentral applications, Tailor-made lactose products
- Services: Spray drying, Co-Processing, Agglomeration, Product Customization

www.meggle-pharma.com

MELTPREP GMBH

BOOTH 08

MeltPrep is specialized in screening methods for hot-melt extruded (HME) formulations. Its innovative process, the Vacuum Compression Molding (VCM) Technology, allows the preparation of thermoplastic dosage forms (e.g. ASDs or implants in the milligram to gram-scale).

VCM is the first lossless approach to melt material into a defined shape without air inclusions, making it a powerful tool to speed up pharmaceutical formulation and process design.

Visit our webpage for:
Our product portfolio

- VCM
- ExtruVis: Measuring residence time distributions of any continuous process
- VChamber: Portable vacuum ovens

A personal free video demo and consultation.

www.meltprep.com

MERCK BOOTH 74/76

Merck KGaA, Darmstadt, Germany, a life science leader, provides specialized SAFC® products and services for pharma and biopharma companies to develop and manufacture drugs safely and efficiently. We offer a broad range of formulation products covering excipients for solid, semi-solid and liquid dosage forms for small and large molecules. Additionally, we offer a portfolio of drug delivery compounds (DDCs), as well as solutions for solubility enhancement and controlled release. Benefit from application know-how and comprehensive global support.

www.sigmaaldrich.com/DE/de/products/pharma-and-biopharma-manufacturing/formulation

MG2 S.R.L. BOOTH 22

Lead by Manuela and Saverio Gamberini, sons of Ernesto Gamberini, one of the founders of the company in 1966, MG2 is a market leader in the design and manufacture of capsule fillers. As well as machines used to dose products into hard shell capsules and other small containers, MG2 Processing Division manufactures complementary production quality control machines, weight control systems, weighing/ sorting machines for tablets and capsules.The Packaging Division offers reliable packaging machines for pharmaceuticals, cosmetics and foodstuffs, such as: blister machines, cartoners, case-packers, forming and filling machines for boxes/ trays, palletizers, Track & Trace systems for cartons and bottles.

www.mg2.it

MICROFLUIDICS INTERNATIONAL CORPORATION BOOTH 15

Microfluidics International Corporation, is a Unit of IDEX MPT, Inc.

Microfluidics manufacture Microfluidizer® high-shear fluid processors. They are a leader in the design and fabrication of laboratory and commercial processing equipment used in the production of micro- and nano-scale materials for pharmaceutical, biotech, chemical and diverse industries.

Microfluidizer® technology enables some of the world's top companies to create superior products, develop intellectual property, improve process efficiency and capitalize on new revenue streams. They set the standard for nanoemulsion and nanoparticle applications.

All process equipment, solutions and support are optimized to meet the unique nanotechnology needs of each and every customer.

www.microfluidics-mpt.com

MUNIT SA

BOOTH 61

MUNIT is operating in the field of MICRONIZATION of Active Pharmaceutical Ingredients (APIs), High Potent APIs, Cytotoxic and Cytostatic compounds, Inhalation products, Steroids, R&D compounds and Generics.

In MUNIT we have combined the technical and commercial expertise of its affiliates Jetpharma SA (Switzerland) and Microchem Srl (Italy) making the best out of 40 years of leadership in the micronization sector.

MUNIT is your access point to JETPHARMAs and MICROCHEMs services:

- Jet- , Pin- and Hammer milling
- Cryogenic Micronization
- Co- micronization
- Sieving, Blending
- De-Lumping
- Technical trials, DoE Studies, Process development and validation
- QbD
- PSD analysis etc.

www.munit.com

MYBIOTECH

BOOTH 23

MyBiotech is a CDMO on the fields of Biotechnology and Pharmaceuticals.

Pharmaceutical devision is specialized on development and technology transfer of nanoparticle and microparticle formulations from concept through development all the way up to GMP manufacturing. We are continiously developing and adapting innovative production methods for GMP manufacturing and processing of particulate systems. We support you with our innovative technologies to bring your project one step closer to success.

Biotechnological production is covered with all aspects of upstream and downstream processes focusing on cell disruption with our propriety technology and purification with chromatographic methods.

www.mybiotech.de

NEXTPHARMA

BOOTH 11

NextPharma is a leading European Pharmaceutical Contract Development and Manufacturing Organisation with sites located in Germany, France, Finland and the UK. With expertise in solids, semi solids, non-sterile and ophthalmic liquids, the company provides services from pharmaceutical development, clinical supplies, scale-up and process validation through to commercial manufacturing for a large range of dosage forms including tablets, capsules, softgels, granules, powders, pellets, gels, creams, sprays and syrups. Each of our sites offer both development and commercial capabilities with some specific niche expertise and capabilities for high potent, hormone, beta lactams, controlled drugs, lipid based and modified release formulations.

www.nextpharma.com

NISSO CHEMICAL EUROPE — BOOTH 65

NISSO CHEMICAL EUROPE GmbH (NCE) was founded in 1989 as a subsidiary of Nippon Soda Co., Ltd. Tokyo, Japan. Based in Düsseldorf, NCE is able to respond swiftly and effectively to customer needs both in Europe and Africa.

NISSO HPC (Hydroxypropyl Cellulose) is one of the key products for NISSO Group. NCE distributes NISSO HPC to European, and African market, offering a wide range of viscosities and particle size formats for direct compression, roller compaction, wet granulation, extrusion, drug solubility enhancement, orodispersible tablets, controlled release matrices, and film coating applications. NISSO HPC is additives free, EP, USP/NF, and JP compliant. Latest new products are high viscosity non-GMO grades of NISSO HPC.

www.nisso-chem.de

PARSUM GMBH — BOOTH 57

The well-known technique of fiber optic spatial filter anemometry was developed by Parsum to measure the velocity and size of particles.

Based on this technology, Parsum offers complete measurement systems for the continuous acquisition of particle size distributions in real time directly in various production processes.

In contrast to conventional laboratory methods, the robust inline probes can be used, for example, to visualize granule growth or coating build-up in batch processes or to ensure consistent product quality in continuous processes.

Critical process parameters such as spray rate and pressure, temperature, air volume etc. can be controlled and optimized product-specifically.

www.parsum.com

PION INC. — BOOTH 19

Pion Inc is the leading provider of tools and analytical instruments that bridge the gap between in vitro experiments and in vivo outcomes. The instruments help companies confidently decide which drug substances and drug products to progress through the development pipeline while reducing risk and long-term investment. Products investigate dissolution, solubility, permeation, ionization, and absorption properties of compounds and drug products. Pharmaceutical and biopharmaceutical users benefit from richer, more relevant insights not easily accessible prior to animal studies. With a 20+ year heritage, Pion serves a multibillion-dollar global market and is headquartered in Massachusetts with an office in the UK.

www.pion-inc.com

QUADRO ENGINEERING CORP. BOOTH 15

Quadro Engineering Corp. is a Unit of IDEX MPT, Inc.

Quadro is the originator of the conical screen mill. We engineer / manufacture an innovative line of size reduction & fine grind mills, and security screeners, and have been the trusted partner of the world's leading Pharmaceutical, Food & Chemical Processing companies for more than four decades.

You can rely on our superior engineering and manufacturing quality to give you maximum up-time and yield. What's more, our products are backed by the highest level of application and technical support, based on more than four decades of experience.

www.quadro-mpt.com

RHEAVITA BOOTH 38

RheaVita provides continuous freeze-drying technology for (bio)pharmaceutical products resolving the issues and shortcomings related to traditional batch freeze-drying, but also providing new opportunities. Our technology integrates all freeze-drying process step unit operations in a continuous production line with the constant infeed of products and the concomitant outfeed of the dried product. Our manufacturing approach avoids scale-up issues, reduces cycle times, allows fast product development, reduces time-to-patient, lowers production costs, makes use of smaller manufacturing installations, requires less clean room space, provides improved quality assurance thanks to PAT (100% inspection with inherent potential for real-time-release) and leads to improved and uniform product quality and process uniformity.

www.rheavita.com

ROTTENDORF PHARMA GMBH BOOTH 47

A leading global contract development and manufacturing organization (CDMO), Rottendorf Pharma has been developing analytical methods and formulations, manufacturing, and packaging solid oral dosage forms for the global pharmaceutical industry for more than 90 years. Rottendorf operates under a philosophy of Total Process Ownership and Total Technological Mastering in which TPO and TTM reduces our clients' management oversight requirements and costs by fully understanding the underlying process and the final goal of every task our customers assign to us. Clients choose Rottendorf Pharma for our broad-range of:

- scientific & technological expertise
- global regulatory capabilities
- commitment to quality
- state-of-the-art facilities
- exceptional customer service

www.rottendorf.com

SEVER PHARMA SOLUTIONS — BOOTH 36

QPharma, Foster Delivery Science and Disphar International are now a part of Sever Pharma Solutions. Together we have formed a new CDMO, a company that can provide our customers with unique capabilities and expertise. We can enhance your efficiency by providing you with a complete value chain to offer you an optimized end-to-end solution.

We are Extrusion. We are Polymer Based Dosage Forms. We are Formulation of Highly Potent dosage forms. We are Long-Acting Implants. We are Solid Dosage Forms. We are Injection Molding. We are Aseptic Fill and Finish. We are Sever Pharma Solutions.

www.severpharmasolutions.com

SHIN-ETSU — BOOTH 13

With more than 50 years of knowledge about production of cellulose ether excipients, Shin-Etsu makes a valuable contribution in several areas of pharmaceutical technology.

In our portfolio you can find several functional excipients, such as:

- L-HPC, a dual-functionality excipient that works as binder and disintegrant
- Pharmacoat® and PVA, binders for granulation and film coating polymers
- Metolose SM-4, polymer for pellet coating to reduce stickiness issues
- Metolose SR®, hydrophilic matrix agent for sustained release applications
- Shin-Etsu AQOAT® (HPMCAS) and HPMCP, polymers for enteric coating application and solid dispersion

Visit us at our booth to discuss technical applications of our products.

www.setylose.com

SKYEPHARMA — BOOTH 50

Skyepharma is a specialist CDMO with particular expertise and capabilities in oral solid dosage forms, being a key player in formulation, drug development and delivery of oral technologies serving the global pharmaceutical, biotech and consumer health industries.

www.skyepharma.com

SOTAX

BOOTH 70/71

The SOTAX Group is the world leader in the development, sales, services of tablet testing technologies for Oral Solid Dosage forms.

- Dissolution Testing - manual, semi-automated, fully automated USP 1, 2, 4, 5, 6 testing
- Physical Testing - hardness, disintegration, friability, tapped density
- Sample Preparation - automated platforms for content uniformity
- Pharma Services - Discovery to Commercialisation

Providing high-quality testing solutions for pharmaceutical dosage forms has been our expertise and passion for nearly 50 years. Strongly committed to local service and driving innovation, the company is proud to be the preferred choice of pharmaceutical companies worldwide.

www.sotax.com

STABLE MICRO SYSTEMS

BOOTH 62

Stable Micro Systems, a leading designer and manufacturer of materials testing instrumentation for over 20 years, will be displaying its revolutionary Powder Flow Analyser and Texture Analyser for controlled release applications. The instrument will provide an accurate and reliable method of measuring the flow characteristics of dry and wet powders.

The TA.XTPlus Texture Analyser can also measure the hardness of granules tablets or micro spheres, tablet disintegration and swelling and will perform mucoadhesion tests. Visit our stand for a revealing demonstration of these two products and discuss your testing requirements with our product specialists.

www.stablemicrosystems.com

SUSS MICROTEC

BOOTH 32

SUSS MicroTec is a leading supplier of equipment and process solutions for microstructuring in the semiconductor industry and related markets. In close cooperation with research institutes and industry partners SUSS MicroTec contributes to the advancement of next-generation technologies such as 3D Integration and nanoimprint lithography as well as key processes for MEMS and LED manufacturing. With a global infrastructure for applications and service SUSS MicroTec supports more than 8.000 installed systems worldwide. SUSS MicroTec is headquartered in Garching near Munich, Germany. For more information, please visit

www.suss.com

SYNTEGON TECHNOLOGY GMBH — BOOTH 66

Syntegon Technology is a leading global process and packaging technology provider. The company, headquartered in Waiblingen (Germany), has been offering complete solutions for the pharmaceutical and food industries for over 50 years. About 6,000 employees at 30 locations in more than 15 countries generated a total revenue of 1.3 billion euros in 2020. The portfolio of intelligent and sustainable technologies includes stand-alone machines, as well as complete systems and services. Fields of application in the pharmaceutical industry are the production, processing, filling, inspection and packaging of liquid and solid pharmaceuticals (e.g. syringes and capsules). In the food industry, the portfolio includes process technology for confectionery as well as packaging solutions for dry foods (e.g. bars, bakery products and coffee), frozen foods and dairy products.

www.syntegon.com

TARGETMOL CHEMICALS INC. — BOOTH 46

TargetMol is headquartered in Boston, MA, and specializes in products and services that serve the research needs of chemical and biological scientists worldwide. With a client base in 40+ countries, TargetMol has evolved into one of the biggest global research suppliers for compound libraries and small molecule compounds.

We diligently updates and offers over 120 types of compound libraries and a wide range of high-quality research chemicals, including inhibitors, activators, natural compounds, peptides, antibodies, and novel life-science kits for laboratory and scientific use. In addition, our lab allows us to conduct CADD (computer-aided drug design) and chemical synthesis to meet the customization needs of our clients.

With our high-quality products & services, fast & efficient global supply chain, and professional technical support, we believe we will help you shorten your research process and yield a more successful result.

www.targetmol.com

THERMO FISHER SCIENTIFIC — BOOTH 09

We offer comprehensive solutions for pharmaceutical extrusion applications from formulation development, to scale-up and commercial manufacturing.

- Hot melt extrusion (HME) is a key technology that can address challenges in pharmaceuticals where API solubility is critical as well as produce alternative drug delivery systems such as subcutaneous, solid implants for controlled-release treatment.
- Continuous granulation reduces the issues often encountered in batch manufacturing and can increase product quality considerably. With online monitoring, continuous manufacturing also enables drugs to be released as soon as they're manufactured.

Our worldwide demonstration labs can assist you in realizing your specific application needs and goals.

www.thermofisher.com/drugformulation

TNO INNOVATION FOR LIFE

BOOTH 75

About TNO

The Netherlands Organization for Applied Scientific Research (TNO) is an independent research organization. We connect people and knowledge to create innovations that boost the sustainable competitive strenght of industry and well-being of society. Now and in the future. This is our mission and its what drives us, the over 3,000 professionals at TNO, in our work every day. We work in collaboration with partners and focus on transitions or changes in nine social themes that we have identified together with our stakeholders.

www.tno.nl

VALICARE GMBH

BOOTH 66

Valicare is an ISO-certified service supplier founded in 2002 as member of the Syntegon Group. The company, headquartered in Frankfurt (Main), offers services for the GMP-regulated industry, with a special focus on ATMP developer and manufacturer, including the setup of comprehensive GMP compliant production solutions.
Our customers are small, medium-sized and large companies from the pharmaceutical, biotechnological and medical devices manufacturing industry, but also scientific institutes that are seeking a GMP-compliant manufacturing authorization according to §13 AMG for their biological or biopharmaceutical product. Our focus is GMP, ISO compliance and quality management consulting and risk-based qualification and validation support.

www.valicare.com

WITEC GMBH

BOOTH 60

WITec GmbH pioneered 3D Raman imaging as well as correlative microscopy and continues to lead the industry in speed, sensitivity and resolution without compromise.

Raman, AFM and SNOM microscopes, select combinations thereof, and Raman-SEM (RISE) instruments can be configured through a modular hardware and software architecture with built-in capacity for expansion.

Research, development and production are located at WITec headquarters in Ulm, Germany. In September 2021, WITec became a member of the Oxford Instruments Group.

www.WITec.de

WUXI STA — BOOTH 30

WuXi STA, a subsidiary of WuXi AppTec, is a leading CDMO providing integrated CMC service including both API and drug product for small molecule, oligonucleotide, peptide and complex conjugate from preclinical to commercial.

WuXi STA has 8 R&D and manufacturing sites across Asia, North America and Europe including the most recent Couvet site in Switzerland. Our comprehensive drug product platform has a strong R&D team of 1200+ scientists with capabilities in broad oral and parenteral dosage forms. Our worldwide supply chain has delivered more than 1200 drug product batches in 2020 and now support 25+ late phase and commercial drugs.

www.stapharma.com

WYATT TECHNOLOGY — BOOTH 31

Providing light scattering instruments for determining the properties of macromolecules and nanoparticles in solution. Wyatt's tools are used in discovery, product development, QC and manufacturing settings for determining the properties of novel therapeutics such as nano-drug carriers, vaccines, biopolymers and proteins; as well as synthetic polymers and nanoparticles.

With Wyatt's instruments you can measure the following: molar mass, size, particle concentration and viral titer, charge and zeta potential, biomolecular interactions, conformation and composition.

Wyatt provides cutting-edge solutions for on-line multi-angle static light scattering (SEC-MALS), field-flow fractionation (FFF-MALS), high-throughput and traditional dynamic light scattering (DLS) and electrophoretic mobility (MP-PALS).

www.wyatt.com

XEDEV BVBA — BOOTH 24

XEDEV is a Service Provider in Particle Engineering and Process Development, operating under "fee for service" principle.

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XEDEV is a spin out from ProCepT, housing 20 years equipment engineering and process know-how in drying, agglomeration and coating.

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We support Pharma, Biotech, Chemical, Food, Cosmetic and Agro industries.

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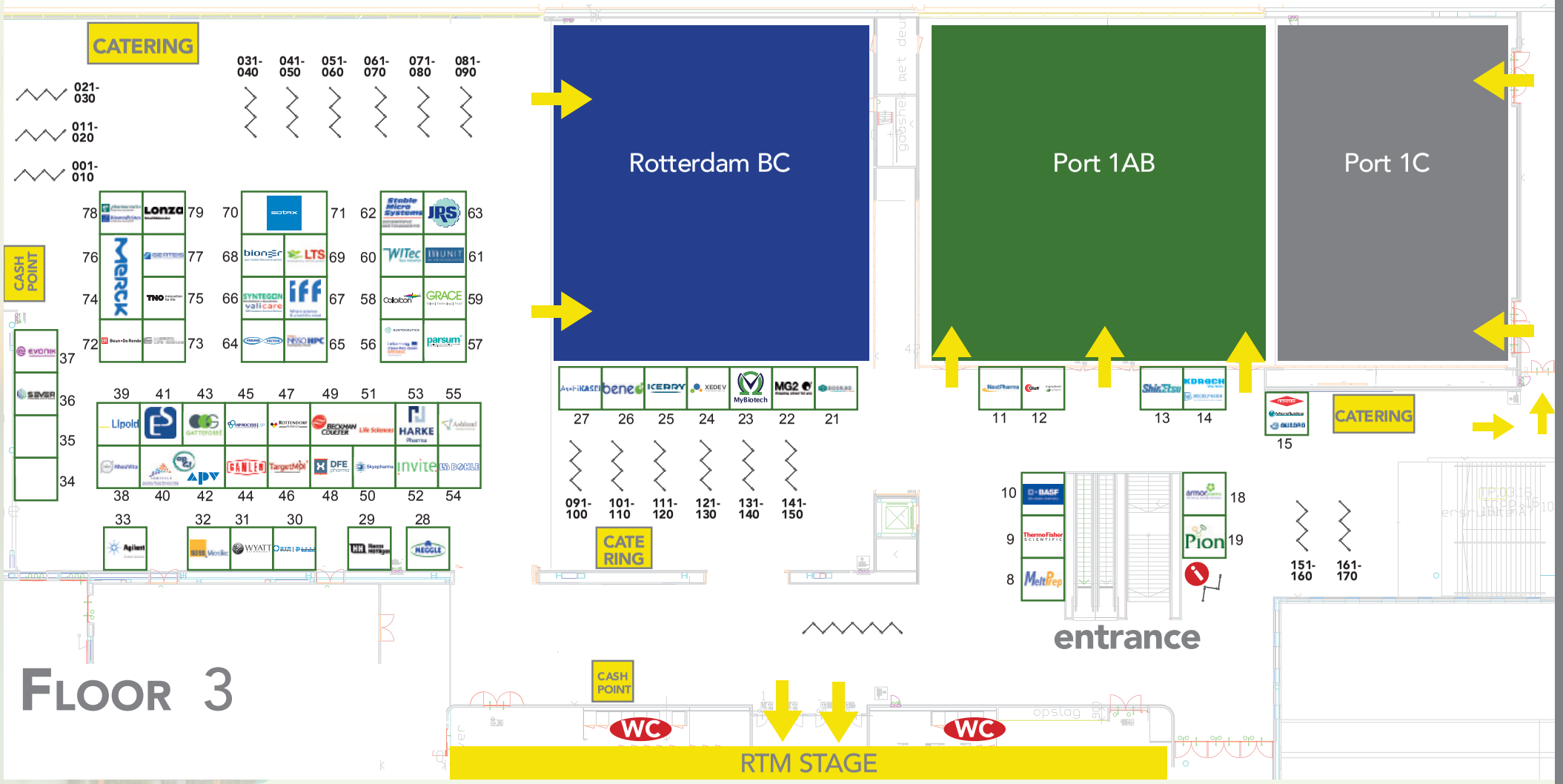

ADRITELF, APGI and APV	booth 40/42	Gamlen Tableting Ltd	booth 44	Lonza Small Molecules	booth 79	RheaVita	booth 38
Agilent Technologies	booth 33	Gattefossé	booth 43	LTS Lohmann Therapie-Systeme	booth 69	Rottendorf Pharma GmbH	booth 47
Armor pharma	booth 18	Gerteis Masch.+Processengin.	booth 77	Lubrizol Life Science	booth 73	Sever Pharma Solutions	booth 36
Asahi Kasei	booth 27	Grace GmbH	booth 59	MDPI Pharmaceutics	booth 78	Skyepharma	booth 50
Ashland	booth 55	Gustoceutics	booth 56	MEDELPHARM	booth 14	Shin-Etsu	booth 13
BASF	booth 10	HARKE Pharma	booth 53	MEGGLE	booth 28	Sotax	booth 70/71
Beckman Coulter Life Sciences	booth 49/51	Harro Höfliger	booth 29	MeltPrep GmbH	booth 08	Stable Micro Systems	booth 62
Beneo GmbH	booth 26	IFF Pharma Solutions	booth 67	Merck	booth 74/76	SUSS MicroTec	booth 32
Beun-De Ronde	booth 72	ingredientpharm	booth 12	MG2 S.R.L.	booth 22	Syntegon Technology GmbH	booth 66
BIOGRUND GmbH	booth 21	InProcess-LSP	booth 45	Microfluidics Internat. Corp.	booth 15	TargetMol Chemicals Inc.	booth 46
Bioneer A/S	booth 68	Interreg Site Drug	booth 56	Munit SA	booth 61	Thermo Fisher Scientific	booth 09
Colorcon	booth 58	INVITE GmbH	booth 52	MyBiotecH	booth 23	TNO Innovation for Life	booth 75
DFE Pharma	booth 48	JRS Pharma GmbH	booth 63	NextPharma	booth 11	Valicare GmbH	booth 66
EnginSoft GmbH	booth 41	Kerry	booth 25	Nisso Chemical Europe	booth 65	WITec GmbH	booth 60
Evonik Industries AG	booth 37	Korsch AG	booth 14	Parsum GmbH	booth 57	WuXi STA	booth 30
The Fitzpatrick Company	booth 15	L.B. Bohle Masch.u.Verfahren	booth 54	Pion Inc.	booth 19	Wyatt Technology	booth 31
Freund-Vector Corporation	booth 64	Lipoid GmbH	booth 39	Quadro Engineering Corp.	booth 15	Xedev bvba	booth 24

Tuesday, 29 March 2022

	Floor 3 Poster session and ResearchPharm®	RTM Stage Invited talks: Adjuvants and excipients for vaccine formulations	Port 1AB Invited talks: Engineering and robotics	Rotterdam BC Short talks: Oral delivery	Port 1C Short talks: Dermal and transdermal delivery
09:00	ResearchPharm® International Exhibition for R&D	Designing and building the next generation of vaccine adjuvants Derek O'Hagan	Digitalisation of pharmaceutical processes Rok Sibanc	Poly(2-alkyl-2-oxazoline) as a polymer platform for highly drug-loaded sustained release tablets Aseel Samaro	Microparticles loaded dissolving microneedle patches for localised and sustained intradermal delivery of amphotericin B Ke Peng
09:20	Gene delivery Nucleotide delivery Cellular drug transport			Feasibility of nanocellulose/ pectin/ alginate composite hydrogels crosslinked with Ca2+ and citric acid as a superabsorbent material Pichapar O-chongpian	3D-printed human hair follicle model to investigate topically administered nano-antibiotics Samy Aliyazdi
09:40	Pulmonary delivery Buccal and nasal delivery Protein formulation and aggregation	Formulation aspects: polymers Francesca Mastrotto	Lab automation and robotics Patrick Courtney	Regional bile salt and lipid concentrations in the rat small intestine: a comparison between the lumen and the mucus layer Mette Klitgaard	Novel bilayer microarray patch (MAP) assisted long acting intradermal delivery for HIV pre-exposure prophylaxis Lalitkumar K. Vora
10:00	Bioavailability and absorption enhancement/ Microbioma Dermal preparations			In-vitro reproduction of the small intestine considering essential intestinal components Scarlett Zeiringer	Confocal Raman microscopy for the investigation of drug delivery into biofilms depending on maturation and bacterial composition Pia Kaiser
10:20	Transdermal delivery Nanoparticles and vesicles	COVID vaccines: strategies for accerleration of drug product development Carmen Arigita	Quality assurance in vaccine manufacturing Christoph Peter	Processing of lipid nanodispersions into solid formulations by spray drying Denise Steiner	Transdermal delivery of cyclodextrin complexed olanzapine via hydrogel forming microneedle arrays Peter E. McKenna
10:40				Tableted freeze-dried siRNA-lipoplexes – evaluation of the stability in gastro-intestinal environment Asad Ur Rehman	Skin microbiota: set up of a protocol to evaluate a correlation between the microbial flora and skin parameters Paola Perugini

11:00 - 11:30	Floor 3: Coffee break with poster session and ResearchPharm®
RTM 11:30 - 12:00	APV Awards
RTM 12:00 - 13:00	Plenary lecture: Accelerated and cost-effective biosimilar introduction with an innovative manufacturing process and lean non-clinical and clinical development, Jaap Wieling, Biosana Pharma, Leiden, The Netherlands
13:00 - 15:00	Floor 3: Lunch break with poster session and ResearchPharm®

	Floor 3 Poster session and ResearchPharm®	RTM Stage Invited talks: Poorly soluble drugs	Port 1AB Invited talks: Oligonucleotide delivery	Rotterdam BC Short talks: Pharmaceutical manufacturing and engineering	Port 1C Short talks: Advanced drug delivery systems
15:00	ResearchPharm® International Exhibition for R&D	Formulating poorly soluble drugs - the general and the specific Korbinian Löbmann	Lipid and dendrimer-based nanomedicine for nucleic acid delivery Elias Fattal	Compaction properties of dry granulated particles prepared from microcrystalline cellulose and lactose powder particles Maryam Tofiq	Chitosan based nanoparticles containing saffron extract for ocular administration of crocin Ylenia Zambito
15:20	Gene delivery Nucleotide delivery Cellular drug transport			Unraveling the role of the solvent during spray drying of amorphous solid disperions of fenofibrate Sien Dedroog	Contact lenses for ocular administration of statins: design and in vitro, ex vivo and in vivo evaluation Carmen Alvarez-Lorenzo
15:40	Pulmonary delivery Buccal and nasal delivery Protein formulation and aggregation	In vitro dissolution conditions René Holm	Spray-drying siRNA-loaded LNPs for inhalation and improved storage and transport conditions Olivia Merkel	Oral solid dosage formulation of API - ionic liquids via spray drying Evangelia Tsolaki	Novel soluble mesoporous dialdehyde cellulose beads for improving the solubility and supersaturation of poorly water-soluble drugs Fan Xie
16:00	Bioavailability and absorption enhancement/ Microbioma			Model development for die filling of different formulations on rotary presses Ann Kathrin Schomberg	Pericardial delivery of therapeutics via thermosensitive hydrogel for cardiac regeneration Cristina Casadidio
16:20	Dermal preparations Transdermal delivery Nanoparticles and vesicles	New development strategies for oral application of nanomilled drugs Elisabeth Kersten	Natural vs. synthetic lipid nanoparticles for the delivery of RNA Raymond M. Schiffelers	Lamination of pharmaceutical tablets: classification and influence of process parameters Vincent Mazel	Near-infrared light-responsive injectable hydrogel containing bismuth nanoparticles for cancer photo-chemo-immunotherapy Mohammad-Ali Shahbazi
16:40				Frozen Quality by Design: Towards rational design of pharmaceutical freezing processes in vials at production scale Leif-Thore Deck	Microfluidic production of protein-lipid nanoaggregates to boost T-cell activation Michele Schlich

Floor 3	RTM Stage	Port 1AB	Rotterdam BC	Port 1C	
Poster session and ResearchPharm®	Invited talks: Oral delivery of novel modalities	Short talks: Nanoparticles 1	Short talks: Drug printing	Invited talks: Protein delivery and biosimilars	
ResearchPharm® International Exhibition for R&D	Nanoformulations for oral delivery: Process point of view Stéphanie Briançon	Development of innovative grafted lipoplexes using PNVP derivatives polymers as a PEG alternative to treat cancer Manon Berger	3D Printed fenofibrate tablets using direct powder printing Maria Ines Barreiros	Challenges for the delivery of fragile molecules: focus on injectable formulations from an industrial perspective Joël Richard	09:00
		Glabrescione B-loaded liposomes for medulloblastoma treatment: a formulative study Raffaella Daniele	Production of personalized medicines within seconds with volumetric 3D printing Alvaro Goyanes Goyanes		09:20
Controlled drug delivery Drug printing Oral delivery Pharmaceutical manufacturing and engineering	BIONDDTM: capsule for oral delivery of biologics Karsten Lindhardt	In vitro and in vivo anti-tumoral evaluation of co-encapsulated fisetin and cisplatin into liposomes Karine Andrieux	Semi-solid extrusion 3D-printing for the manufacture of HPMC based fast disintegratin Pattaraporn Panraksa	Oral delivery of peptides: from permeation enhancers to devices David Brayden	09:40
		Lyotropic liquid crystal drug delivery system: cubosomes encapsulate cromolyn sodium for oral delivery Linh Dinh	Pre-crosslinked alginate hydrogels: physico-chemical requirements for high 3D-printing performance Giovanni Falcone		10:00
	Modulation of tight junction properties for the oral delivery of biologics Alistair Taverner	New nanoparticle formulation for cyclosporin a: in vitro assessment Amandine Gendron	Cocrystal formation enables 3D printing of high melting drugs via combined HME and FDM processing Marta Kozakiewicz-Latała	Microfluidic technology and machine learning approaches for the development of biopharmaceutical products Paolo Arosio	10:20
		Ionic liquids as solubilizing agents and stabilizers, for antimicrobial eye drops containing diacerein Brunella Grassiri	Advanced melt drop deposition: a promising technology for additive manufacturing of oral dosage forms Thomas Kipping		10:40
11:00 - 11:30	Floor 3: Coffee break with poster session and ResearchPharm®				
RTM 11:30 - 12:00	ADRITELF Award session: International ADRITELF Award 2022				
RTM 12:00 - 13:00	Plenary lecture Extracellular vesicles: boosting clinical translation of nanomedicine, Paolo Ciana, University of Milan, Italy				
13:00 - 15:00	Floor 3: Lunch break with poster session and ResearchPharm®				
Floor 3	**RTM Stage**	**Port 1AB**	**Rotterdam BC**	**Port 1C**	
Poster session and ResearchPharm®	Invited talks: Continuous manufacturing	Short talks: Nanoparticles 2	Invited talks: Local delivery to the ear, eye and lung	Short talks: Nucleotide delivery	
ResearchPharm® International Exhibition for R&D	QbCon 1: a new continuous manufacturing concept Robin Meier	Immunomodulatory nanoparticles for sepsis treatment Younes Louaguenouni	Drug delivery to the inner ear and periodontal pocket Florence and Juergen Siepmann	In vitro and ex vivo delivery of siRNA via VIPER polymer system as a potential treatment for COVID-19 Domizia Baldassi	15:00
		Development and optimization of a new nanocarrier system for lipophilic drugs: human serum albumin nanocapsules with a triglyceride core Sarah Hester		Hybrid lipid/polymer nanoparticles to tackle the cystic fibrosis mucus barrier in siRNA delivery to the lungs Gemma Conte	15:20
Controlled drug delivery Drug printing Oral delivery Pharmaceutical manufacturing and engineering	J&J experience: continuous manufacturing from equipment qualification to regulatory submission Alessandro Cassetti and Domenico Annese	Rational design and microfluidic transposition of Lipid Nanocapsules for the encapsulation of poorly water-soluble molecules Kevin Matha	Polymeric micelles for ocular drug delivery Sara Nicoli	Microfluidic production of plasmid DNA-loaded nanogels for non-viral gene delivery Zoe Whiteley	15:40
		Anticancer thermo-sensitive polymer prodrug nanoparticles prepared by an all-water nanoprecipitation process Léa Guerassimoff		Dual Loaded Core-Shell mRNA and pDNA Nanocarriers for co-delivery of NA-encoded antigens and adjuvants Sarah S. Nasr	16:00
	Early drug product development approaches for continuous manufacturing Valérie Vanhoorne	Strategies to decorate polymeric nanoparticles with NGR peptides to target cancer cells Claudia Conte	Repurposing of cationic amphiphiles for the local delivery of RNA therapeutics Koen Raemdonck	Targeted delivery of CRISPR/Cas9 plasmid system for cancer immunotherapy approaches Hasan Akbaba	16:20
		Silk fibroin nanoparticles to redirect immunity against different cancers: proof of concept in a murine model Elia Bari		Development of lipoplexes with enhanced crossing of cell barriers Busra Arpac,	16:40

Thursday, 31 March 2022

	Floor 3	RTM Stage	Port 1AB	Rotterdam BC	Port 1C
	Poster session and ResearchPharm®	Invited talks: Nanoparticles	Invited talks: 3D printing technologies	Short talks: Bioavailability and microbioma	Short talks: Mucosal, nasal and pulmonary delivery
09:00	ResearchPharm® International Exhibition for R&D Stability testing Advances therapy medicinal products	Novel biohybrid nanomedicines for cancer therapy: from nanoformulation design to the in vivo validation Helder Santos	The power of 3D-printing of drugs - perspective of patients and healths care professionals Elisabeth Ruijgrok	Improving dissolution behavior and oral absorption of weakly basic drugs using ph modifiers: a physiologically realistic mass transport analysis Jozef Al-Gousous	Development of an anti-infective formulation platform by plant extract loaded electrospun fibers - translational perspectives for nonsurgical periodontitis therapy Viktoria Planz
09:20	In-vitro/In-vivo correlations Starting materials			Towards the design of mucus-penetrating and permeation enhancer albumin-based nanoparticles for the oral delivery of therapeutic proteins Cristina Pangua	Open Flow Microperfusion to Evaluate Drug Penetration in the Buccal Mucosa Laura Wiltschko
09:40	Quality control and PAT Pediatric and geriatric drug delivery	Nanomedicine in the treatment of cancer and neurodegenerative diseases is impacted by patient sex Avi Schroeder	New 3D-printed oral dosage forms Dimitris Fatouros	Excipients modulate drug bioavailability, transporter expression, endogenous hormones and nuclear receptors in a sex and concentration dependent manner Christine M. Madla	Optimisation of Nose-to-Brain Delivery for Patient with or without Septum Perforation Laura Deruyver
10:00	Physical pharmacy Preformulation			Fluidized-bed granulation and tableting of living microorganisms Karl Vorländer	Inflamed model of the human alveolus on a breathing lung-on-chip Claus-Michael Lehr
10:20	Advanced drug delivery Parenteral delivery	Nanomedicines: tracking their fate from site of administration to site of action Simona Mura	Polyprint: 3D printing with a GMP-ready FDM printer Simon Geisler and Julian Quodbach	Direct compression: increased viability of probiotics and importance of excipients for soft-tableting Susanne Florin-Muschert	Spray-dried pneumococcal membrane vesicles Vaccine for Pulmonary Immunization Mina Mehanny
10:40	Continuous manufacturing and PAT			Active machine learning for delivery of precision probiotics Laura E. McCoubrey	Liposomal encapsulation of carbon quantum dots designed to treat coronavirus infections modifies their fate after pulmonary delivery Maud Taulen

11:00 - 11:30	Floor 3: Coffee break with poster session and ResearchPharm®
RTM 11:30 - 12:00	APGI Award: Marie Maurice Janot Award
RTM 12:00 - 13:00	Plenary lecture: Lipids, lipid nanoparticles and Covid-19 mRNA vaccines Pieter Cullis, University of British Columbia, Vancouver, Canada
13:00 - 15:00	Floor 3: Lunch break with poster session and ResearchPharm®

	Floor 3	RTM Stage	Port 1AB	Rotterdam BC	Port 1C
	Poster session and ResearchPharm®	Invited talks: Controlled drug delivery	Short talks: Continuous manufacturing and PAT	Short talks: Bioprinting and protein formulation	Invited talks: Topical formulations and transdermal delivery
15:00	ResearchPharm® International Exhibition for R&D Stability testing Advances therapy medicinal products	Multicompartment 3D cell-based bioengineered mucosal models in drug delivery Bruno Sarmento	Identification of biopharmaceuticals drug substances using non-destructive and non-invasive approach Mahendra Kumar Shukla	In-vial direct dosing and drying of biologics by inkjet printing Daniela Fiedler	Topical formulation development - the application of confocal raman spectroscopy Majella Lane
15:20	In-vitro/In-vivo correlations Starting materials		Inline nanoparticle sizing and process control for nanomedicine manufacturing processes Rut Besseling	Carvacrol-loaded 3D printed PLA scaffolds for antibiofilm performance Xián Farto-Vaamonde	
15:40	Quality control and PAT	Oral colon delivery of drugs based on intestinal transit time Alessandra Maroni	Dry amorphization of itraconazole using continuous twin-screw technology at low temperatures Margarethe Richter	A machine learning and machine vision pipeline for ODF development Colm O'Reilly	Dermal/transdermal delivery by nanocarriers: formulation in a regulatory perspective Carlotta Marianecci
16:00	Pediatric and geriatric drug delivery Physical pharmacy Preformulation		A novel continuous coating process for pellets Anna Pennemann	Protein integrity in highly loaded melt extrudates processed by small scale ram and twin screw extrusion Katharina Dauer	
16:20	Advanced drug delivery Parenteral delivery	Oral gut-targeted delivery of immunomodulatory proteins and antibodies Silvia Matiz	Continuous direct compression: challenges and solutions related to feeding Bram Bekaert	The viscosity reduction platform: enabling subcutaneous delivery Tobias Rosenkranz	Strategies for wound healing Maike Windbergs
16:40	Continuous manufacturing and PAT		Inter-tablet porosity variation across large sample size measured by at-line terahertz analysis Prince Bawuah	In-process stabilization of a protein drug by saccharides Johanna Dieplinger	

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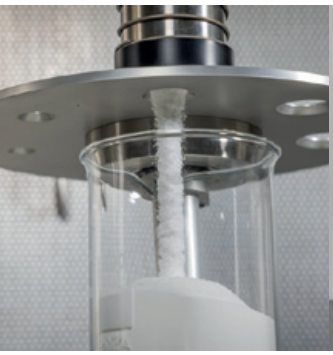
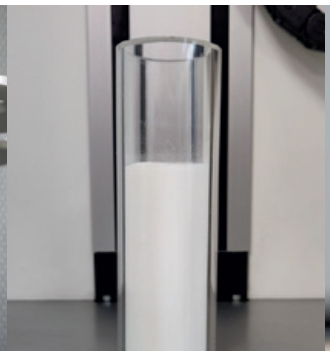

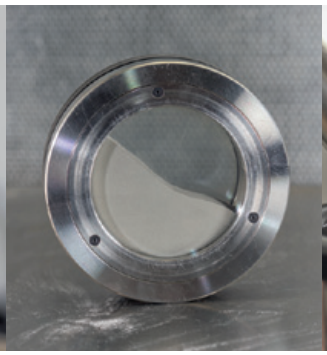


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