

3<sup>rd</sup>

European

Conference on  
Pharmaceutics

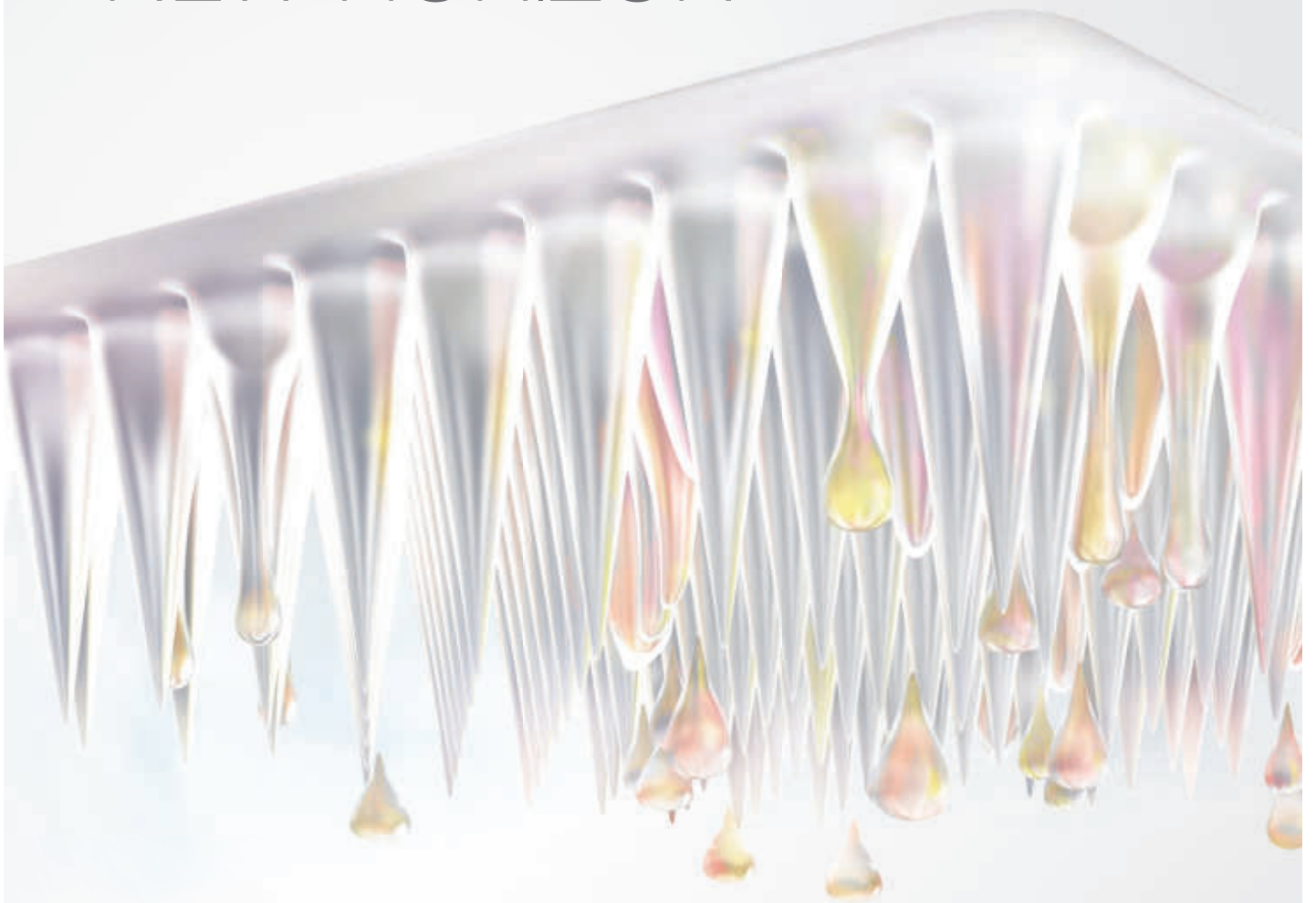
# ABSTRACTBOOK

25 to 26 March 2019  
Bologna, Italy



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# TAKING TRANSDERMAL DELIVERY TO THE NEW HORIZON



LTS Innovative transdermal systems offer decisive advantages for patients, healthcare professionals and partners from the pharmaceutical industry.  
The next horizon: Micro Array Patches (MAP)

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**ORGANISERS****A.D.R.I.T.E.L.F**

Italian Association of Pharmaceutical  
Technology and Law  
Via D. Montesano 49  
80131 Napoli, Italy

**APGI**

International Society of Drug  
Delivery Sciences and Technology  
5, rue Jean-Baptiste-Clément  
92296 Châtenay-Malabry, France

**APV**

International Association for  
Pharmaceutical Technology  
Kurfuerstenstraße 59  
55118 Mainz, Germany

**OPENING HOURS**

Business office and registration desk

Sunday	24 March 2019	15:00 - 18:00
Monday	25 March 2019	08:00 - 19:00
Tuesday	26 March 2019	08:00 - 17:00

**WiFi ACCESS**

WiFi-name	ecbologna2019
password	ecbologna2019

## CHAIRS AND COMMITTEES

### Chair of the conference

Dejan Djuric, Bayer, Germany

### Local chair of the conference

Nadia Passerini, University of Bologna, Italy

### Co-chairs of the conference

Jörg Breitreutz, University of Düsseldorf, Germany

Anna-Maria Fadda, University of Cagliari, Italy

Jürgen Siepmann, University of Lille, France

### Members of the programme committee

Jörg Breitreutz, University of Düsseldorf, Germany

Dejan Djuric, Bayer, Germany

Anna-Maria Fadda, University of Cagliari, Italy

Elias Fattal, University of Paris-Sud, France

Giuseppe De Rosa, University of Naples Federico II, Italy

Jürgen Siepmann, University of Lille, France

## SOCIAL PROGRAMME

### Welcome reception

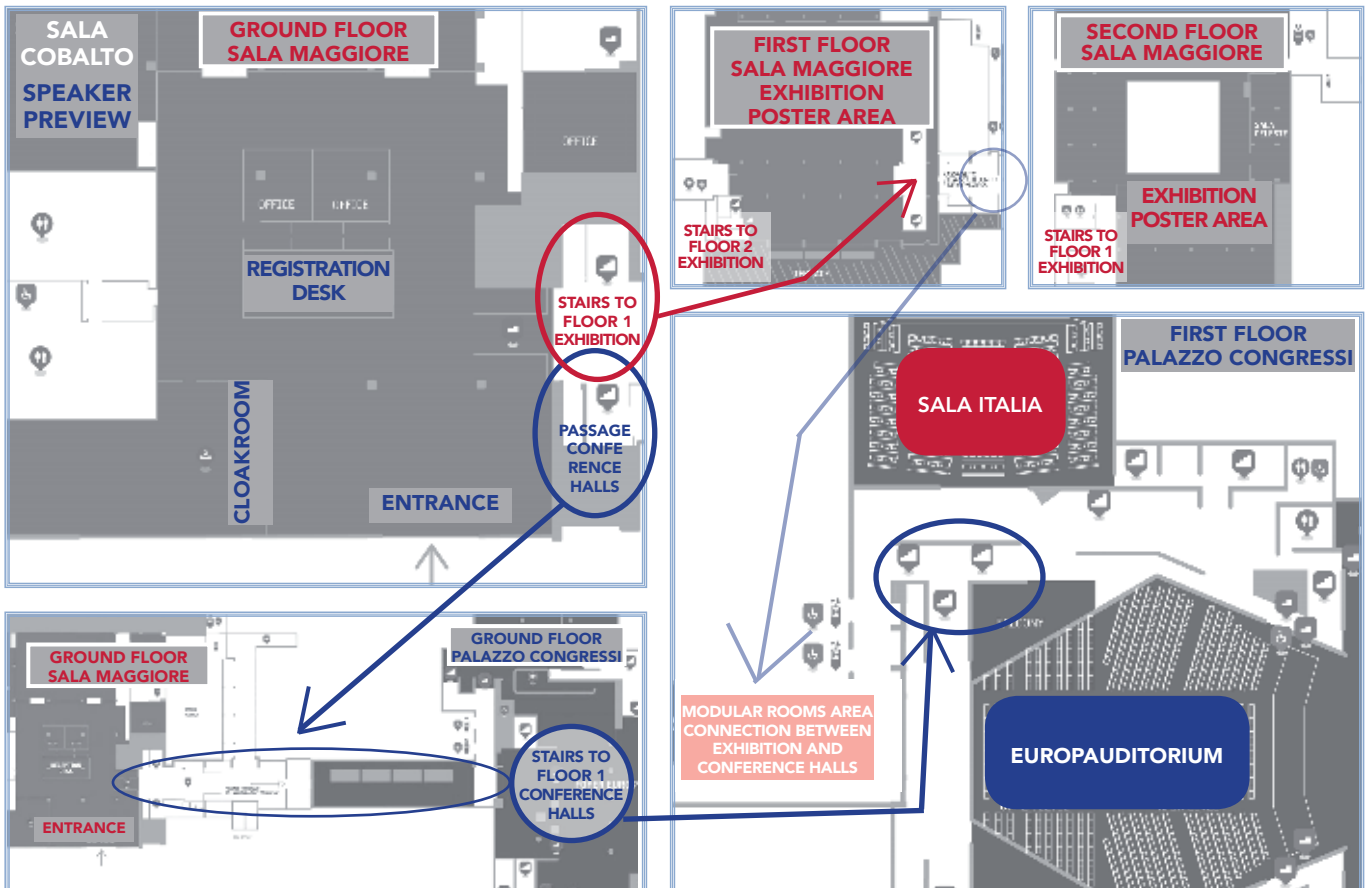
The welcome reception will be held on

Monday, 25 March 2019  
from 17:00 - 19:00 h

at the exhibition and poster area on first and second floor of Sala Maggiore.

Enjoy a glass of wine while networking with old and new friends or take a walk around the industrial exhibition.

## SITE MAP



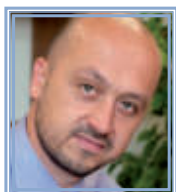
**SCIENTIFIC PROGRAMME  
MONDAY, 25 MARCH 2019**

EUROPAUDITORIUM

09:00 - 09:30 **Opening ceremony**  
 Jörg Breitzkreutz, University of Düsseldorf, Germany  
 Anna Maria Fadda, University of Cagliari, Italy  
 Nadia Passerini, University of Bologna, Italy  
 Jürgen Siepmann, University of Lille, France

Plenary lecture  
 Chair: Dejan Djuric, Bayer, Germany

09:30 - 10:30 **Cytosolic delivery of bio-therapeutics: the struggle with biological barriers goes on**  
 Stefaan de Smedt, University of Ghent, Belgium



10:30 - 11:00 **Coffee break**  
**Industrial exhibition and poster session**

sponsored by  **LTS**  
TRANSDERMAL MARKET LEADER

**Invited talks: Manufacturing equipment and technologies**  
 Chairs: Andrea Gazzaniga, University of Milan, Italy / Christian Mühlenfeld, Ashland, Germany

11:00 - 11:40 **Continuous drug product manufacturing - what does the future of pharmaceutical manufacturing looks like?**  
 Giustino di Pretoro, Johnson & Johnson, Belgium



11:40 - 12:20 **Containment of highly potent compounds during manufacturing of solid dosage forms: in the past, at present and where will this all go to?**  
 Iris Ziegler, Corden Pharma, Germany



12:20 - 13:00 **The role of primary packaging in biotech drug stability: innovative solutions**  
 Odra Pinato/Annalisa Delnevo, Stevanato Group, Italy



13:00 - 15:00 Lunch break  
Industrial exhibition and poster session

Invited talks: Nanomedicines

Chairs: Elias Fattal, University of Paris-Sud, France / Stefan Salmaso, University of Padova, Italy

15:00 - 15:40 New polymer-based drug delivery systems for cancer therapy  
Julien Nicolas, University of Paris-Sud, France



15:40 - 16:20 Drug product nanotechnologies: formulation and process aspects from laboratory to production plant  
Paolo Gatti, Aptuit, Italy



16:20 - 17:00 Neurotrophic factor brain delivery for Parkinson's disease therapy  
Maria José Blanco-Prieto, University of Navarra, Spain



17:00 End of session

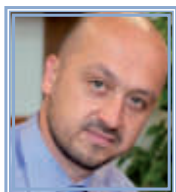
17:00 - 19:00 Welcome reception with flying buffet in the exhibition and poster area

SALA ITALIA

Plenary lecture  
Chair: Dejan Djuric, Bayer, Germany

EUROPAUDITORIUM

09:30 - 10:30 Cytosolic delivery of bio-therapeutics: the struggle with biological barriers goes on  
Stefaan de Smedt, University of Ghent, Belgium



10:30 - 11:00 Coffee break  
Industrial exhibition and poster session

sponsored by  LTS  
TRANSDERMAL MARKET LEADER



**Short talks: Dermal and transdermal preparations // Mucosal drug delivery**

Chairs: Carla Caramella, University of Milan, Italy / Sebastian Braun, tesa Labtec, Germany

- 11:00 - 11:20 **Enhancement of skin penetration of lipid-based nanocarriers**  
Coralie Bellefroid, University of Liege, Belgium
- 11:20 - 11:40 **Glycosaminoglycans based scaffolds for wound healing**  
Giuseppina Sandri, University of Pavia, Italy
- 11:40 - 12:00 **Development of dissolving microneedles for delivery of vancomycin hydrochloride**  
Delly Ramadon, Queens University of Belfast, United Kingdom
- 12:00 - 12:20 **Established and innovative buccal dosage forms controlling oromucosal lidocaine permeation**  
Dina Kottke, University of Düsseldorf, Germany
- 12:20 - 12:40 **Oral self-emulsifying drug delivery system and intranasal nanoemulsions of phenytoin**  
Adriana Santos, University of Beira Interior, Portugal
- 12:40 - 13:00 **High dose tobramycin dry powder inhaler: in vivo-in vitro dose emission**  
Paolo Colombo, University of Parma, Italy

13:00 - 15:00 **Lunch break**  
**Industrial exhibition and poster session**

**Short talks: Bioavailability and IVIVC // Pharmaceutical manufacturing and engineering**

Chairs: Odile Chambin, Uni. of Burgundy, France / Johannes Bartholomäus, Pharmakreativ, Germany

- 15:00 - 15:20 **In vitro and in vivo assessment of different enabling approaches for oral delivery of fenofibrate**  
Ana Calduch-Arques/Anette Müllertz, University of Copenhagen, Denmark
- 15:20 - 15:40 **Improved vitamin K uptake from orally administered mixed micelles under bile deficient conditions**  
Thijs Rooimans, University of Utrecht, Netherlands
- 15:40 - 16:00 **A novel predictive dissolution method for establishing an IVIVC for contraceptive intravaginal rings**  
Katharina Tietz, University of Greifswald, Germany
- 16:00 - 16:20 **The Manufacturing Classification System: factors influencing process choices**  
Neil Dawson, Pfizer Worldwide Research & Development, United Kingdom
- 16:20 - 16:40 **Lean and efficient development of a pseudoephedrine formulation resistant to conversion into meth**  
Isabella Immohr, Grünenthal GmbH, Germany
- 16:40 - 17:00 **Solvent-induced phase separation during ASD preparation**  
Gabriele Sadowski, University of Dortmund, Germany

17:00 - 19:00 **Welcome reception with flying buffet in the exhibition and poster area**

Be always up to date! Programme updates will be posted on Twitter. #ECPharmaceutics

**SCIENTIFIC PROGRAMME**  
**TUESDAY, 26 MARCH 2019**

EUROPAUDITORIUM

**Invited talks: Arising new manufacturing technologies**

Chairs: Peter Kleinebudde, Uni. of Düsseldorf, Germany / Susanne Page, F. Hoffmann-La Roche, Germany

09:00 - 09:40

Electrospinning and its applications in pharmaceuticals

Romána Zelkó, Semmelweis University, Hungary



09:40 - 10:20

Electrospraying in drug formulation

Guy van den Mooter, University of Leuven, Belgium



10:20 - 11:00

From 3D- to 4D-printing in the development of drug delivery systems

Alice Melocchi, University of Milan, Italy



11:00 - 11:30

Coffee break

Industrial exhibition and poster session

sponsored by



11:30 - 12:00

Awards

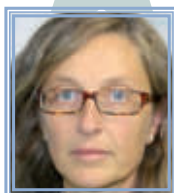
**Plenary lecture**

Chair: Hartmut Derendorf, University of Florida, United States

12:00 - 13:00

From the idea to the bedside: is the regulatory path coherent with patients' expectations?

Paola Minghetti, University of Milan, Italy



13:00 - 15:00

Lunch break

Industrial exhibition and poster session



**Invited talks: Advances in oral drug delivery**

Chairs: Florence Siepmann, University of Lille, France / Kathrin Bartscher, NextPharma, Germany

15:00 - 15:40

**Novel in vitro test methods for predicting the performance of oral dosage forms in the gastrointestinal tract**

Werner Weitschies, University of Greifswald, Germany



15:40 - 16:20

**New insights into tablet porosity and its critical role in oral drug delivery**

Axel Zeitler, University of Cambridge, United Kingdom



16:20 - 17:00

**Innovation in solid oral dosage forms - an industrial view**

Marc Schiller, Grünenthal GmbH, Germany



17:00

End of conference



SALA ITALIA

**Short talks: Oral drug delivery**

Chairs: Duncan Craig, Uni. College London, United Kingdom / Edmont Stoyanov, Nisso Chem. Eu., Germany

09:00 - 09:20

**Mathematical modelling of antibacterial release from a biphasic gel system**

Mario Grassi, University of Trieste, Italy

09:20 - 09:40

**Prilling of API/FA suspensions: Screening of additives for drug release modification**

Elien De Coninck, University of Ghent, Belgium

09:40 - 10:00

**Adipic acid/Saccharin based celecoxib eutectic mixtures for improvement of wettability and dissolution rate**

Sharif Md Abuzar, University of Yonsei, Republic of Korea

10:00 - 10:20

**Comparison of different dosage forms to deliver extremely oxygen-sensitive probiotics**

Odile Chambin, University of Bourgogne Franche-Comté, France

10:20 - 10:40

**Scaled up solid formulation of living anaerobic bacteria for oral delivery using electrospinning**

Panna Vass, University of Budapest, Hungary

10:40 - 11:00

**Utilising co-axial electrospinning as a taste-masking technology for paediatric drug delivery**

Hend Abdelhakim, University College London, United Kingdom

11:00 - 11:30 Coffee break  
Industrial exhibition and poster session

sponsored by  LTS  
TRANSDERMAL MARKET LEADER

11:30 - 12:00 Awards

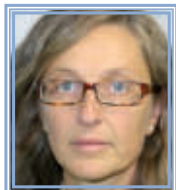
EUROPAUDITORIUM

Plenary lecture

Chair: Hartmut Derendorf, University of Florida, United States

EUROPAUDITORIUM

12:00 - 13:00 From the idea to the bedside: is the regulatory path coherent with patients' expectations?



Paola Minghetti, Univeristy of Milan, Italy

13:00 - 15:00 Lunch break  
Industrial exhibition and poster session

### Short talks: Nanoformulations

Chairs: Giuseppe de Rosa, Uni. of Naples Federico II, Italy / Geraldine Piel, University of Liege, Belgium

- 15:00 - 15:20 Chemical reaction-free coating of biodegradable nanoparticles with hyaluronic acid. Cell uptake experiments and mathematical modeling  
Marco Biondi, University of Napoli, Italy
- 15:20 - 15:40 Multicellular spheroid based on a triple co-culture: a novel 3D model to mimic pancreatic tumor complexity  
Simona Mura, University of Paris-Sud, France
- 15:40 - 16:00 The effect of PEG geometry on the circulation properties of polymeric micelles  
Marzieh Najafi, University of Utrecht, Netherlands
- 16:00 - 16:20 A new theranostic system for the treatment of inflammatory diseases  
Sara Baldassari, University of Genova, Italy
- 16:20 - 16:40 Theranostic nanocarriers loaded with nerve growth factor enable enhanced brain recovery after stroke  
Matthias G. Wacker, Fraunhofer IME, Germany
- 16:40 - 17:00 Evaluation of liposomes as antisense therapy vectors for the treatment of preeclampsia  
Karine Andrieux, University of Paris Descartes, France
- 17:00 End of conference

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ACKNOWLEDGEMENTS

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## PHARMACEUTICALS

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Our capabilities include:

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- Taste-masking of very bitter APIs by coacervation technology
- Functional coatings to modify release: delayed, pulsatile or colon-targeted release
- Matrix tablets
- Final dosage forms: dry syrup, sachets, orally disintegrating tablets, capsules, tablets

We have commercial manufacturing capabilities in the EU and the US and offer feasibility, clinical trial material and commercial manufacturing all in one company.

We are a partner to >100 companies across Branded, Specialty, Generic, and OTC segments and our partnerships have resulted in over 60 product launches in 44 countries in the last 10 years.

## POSTER SESSION ON MONDAY, 25 MARCH 2019

Continuously exhibited from 09:00 to 19:00 h, with special presentations by authors from 10:00 to 10:30 h and 13:00 to 15:00 h. The number indicates the poster panel number.

### Cellular drug transport

01. Photoswitchable cell penetrating peptides (CCPs) for defined control of endocytosis  
E. Cataldi, M. Schock, L. Meinel, M. Decker and T. Lühmann
02. Effects of the tight junction modulator benzalkonium chloride on Caco-2 cells  
M. Schulze and S. Reichl
03. Elucidating the cellular location dependent action of lactoferrin in glioma using nuclear and cytoplasmic targeted chitosan nanoparticles  
S. Tammam, H. Azzazy and A. Lamprecht

### In vivo - in vitro correlations

04. Relationship between in vitro lipolysis release and in vivo performance of lipid-based drug delivery systems for a BCS class II compound  
M. Bayarri, A. Akkermans and H. Teles
05. Establishment of IVIVC for compositionally equivalent peptide microsphere drug products  
D. Burgess, J. Andahriya, Y. Wang, S. Choi and Y. Zou
06. Investigation of the discriminatory power of dissolution specifications for a BCS-based biowaiver via pharmacokinetic modeling  
M. A. Hofsäss and J. B. Dressman
07. Investigating ibuprofen release from three immediate release Nurofen® formulations using the Dynamic Gastric Model (DGM)  
M. Knopp, M. McGirr, S. Barnett and A. Müllertz
08. An in vitro-in silico approach to predict the bioavailability of Albendazole, a BCS II weak base  
M. Pettarin, M. B. Bolger and E. S. Kostewicz

### Pharmaceutical manufacturing and engineering II

09. A comparison of a co-processed, Lactose/Starch-based Excipient for Direct Compression (StarLac®) with its corresponding Physical Admixture in powder and tablet form, investigated by Dynamic Vapor Sorption (DVS)  
V. Fichtner, J. Zeleznik, C. Nowak and F. Penz
10. Advanced modelling of the twin screw extrusion process  
V. Düphans, J. Wesholowski and M. Thommes
11. Influence of the load in scale-up of the spheronization process  
M. Evers, S. Abramov, D. Weis, S. Antonyuk and M. Thommes
12. Rheological characterization as a tool for the high shear granulation process development  
E. Franceschinis, F. Schmid, R. Baggio, N. Realdon and A. Santomaso
13. Low temperature polymer-assisted cocrystallisation using hot melt extrusion processing  
M. Gajda, K. Nartowski and B. Karolewicz
14. Development and application of an optimization procedure for an operating point in hot melt extrusion  
T. Gottschalk, J. Wesholowski, C. Mühlenfeld and M. Thommes
15. Identifying limits of critical process parameters in rotary fluidized bed agglomeration and tangential spray process with inline particle size measurement  
M. Langner, A.-L. Ruppert and B. Wolf

16. Use of mixer torque rheometry to predict optimal L/S ratio for twin-screw granulation  
S. Pohl and P. Kleinebudde
17. Linking raw material characteristics and process settings to granule CQAs in continuous twin screw granulation  
C. Portier, V. Vanhoorne, G. Di Pretoro, T. De Beer and C. Vervaet
18. Robustness of low-dosed lactose/MCC-based formulations in continuous twin screw granulation  
C. Portier, V. Vanhoorne, G. Di Pretoro, T. De Beer and C. Vervaet
19. Near infrared chemical imaging of binder distribution in high shear wet granulation process  
P. Mongpraneet, N. Charoenthai, W. Limwikrant and S. Puttipipatkachorn
20. High shear vs. fluidized bed granulation: a comparative study with paracetamol  
E. Stoyanov, B. Ehlig and P. Rusu
21. Effect of binder type and addition method on granule properties in continuous twin screw wet granulation  
L. Vandevivere, C. Portier, V. Vanhoorne, O. Häusler, D. Simon, T. De Beer and C. Vervaet
22. DoE combined with process automation: a new approach to support quality by design  
B. Wagner, S. Otterbach, T. Brinz and J. Khinast
23. Enhancing redispersibility of API-nanoparticle-loaded granules produced in a fluidized bed process  
M. Wewers, J. H. Finke, M. Juhnke and A. Kwade
24. Low-shear wet granulation process: new strategies in design and manufacturing of granular materials  
V. De Simone, D. Caccavo, G. Lamberti, M. d'Amore, A. A. Barba and A. Dalmoro

## Physical pharmacy

25. Terahertz spectroscopy – Crystallinity investigation of smartFilms®  
D. Knoth, J. Ornik, M. Koch and C. M. Keck
26. Molecular-level insight into mesoporous silica formulations: the effect of surface interaction on formulation performance of glibenclamide and terfenadine  
D. J. Price, A. Nair, J. Dressman and C. Saal
27. Physical transitions in pharmaceutical excipients: a study of thermodynamics of starch gelatinization using optical microscopy and DSC  
V. Kocherbitov and T. Skansberger
28. Understanding interactions between fine and coarse lactose: the interest of microwaves AFM  
C. Thomas, N. Pocholle, E. Bourillot, N. Prioul, L. Kerriou, V. Gamberre and E. Lesniewska
29. Soluplus® nanomicelles to improve solubility of BCS-class II drugs  
R. Corsaro, T. Musumeci and R. Pignatello

## Nanoformulations I

30. Optimization studies for a new technological approach for Nanostructured Lipid Carriers (NLC) production  
R. Pignatello, S. Cianciolo, J. Migliorisi and C. Carbone
31. Carbosilane dendrimers loaded with siRNA against Nrf2 to overcome cancer drug resistance in bladder tumor cells  
M. Argenziano, L. Ambrosio, I. de Graaf, G. Barrera, R. G. Ramirez, S. Pizzimenti and R. Cavalli
32. Novel high-yield and continuous process in manufacturing of nanoliposomes covered by polymeric thin layer  
A. A. Barba, S. Bochicchio, P. Bertoncin, G. Lamberti and A. Dalmoro



33. Biodistribution of glycoliposome delivery system in a zebrafish model  
F. Biondo, J. Bussmann, S. Romeijn, W. Jiskoot and L. Casettari
34. Clotrimazole loaded ionic polymeric micelles based on hyaluronic acid  
M. C. Bonferoni, D. Miele, G. Marrubini, S. Rossi, G. Sandri, S. Stoilova and F. Ferrari
35. Nanostructured lipid carriers based on chitosan oleate as polyphenol delivery systems  
D. Miele, G. Sandri, S. Rossi, B. Vigani, S. Stoilova, F. Ferrari and M. C. Bonferoni
36. Development of novel super stealth immunoliposomes for anticancer drug delivery  
E. Canato, L. Tomasini, D. Gabbia, M. Guido, A. Alimonti, S. De Martin and G. Pasut
37. On the selection of excipients to protect liposomes prepared by ethanol injection upon freeze-drying  
F. Selmin, S. Franzé, P. Rocco, P. Minghetti and F. Cilurzo
38. Lipid prodrugs and lipoproteins: shedding light on their interaction and the impact on drug bioavailability  
E. Coppens, S. Mura, D. Desmaele and P. Couvreur
39. Influence of liposome surface decoration on their interaction rate with murine macrophages  
N. d'Avanzo, L. Di Marzio, C. Celia, F. Cilurzo and M. Fresta
40. Nanostructured lipid carriers loaded with lipophilic Pt based drugs targeting the glioblastoma  
I. Arduino, A. Lopodota, A. Cutrignelli, V. Laquintana, A. Lopalco, N. Margiotta, F. Mondelli, M. Franco and N. Denora
41. Cellular biocompatibility and transport of PEGylated surfactant-based vesicles across intestinal model system of polarized enterocyte monolayers  
L. Di Marzio, F. Cilurzo, C. Celia, M. Carafa, D. Cosco, D. Paolino and M. Fresta
42. Solid lipid nanoparticles as a delivery platform: investigations of formulation parameters  
K. Elbrink, R. Holm and F. Kiekens
43. Pentamidine in Parkinson's disease: a N2B approach via chitosan-coated niosomes  
F. Rinaldi, L. Seguella, S. Gigli, P. N. Hanieh, A. Imbriano, E. Del Favero, G. Sarnelli, C. Marianecchi, G. Esposito and M. Carafa
44. Formulation and characterization of Soluplus® based polymeric micelles  
G. Katona, B. Sipos, R. Ambrus, I. Csóka and P. Szabó-Révész
45. Ursodeoxycholic acid in phospholipid-based nanostructured carriers for the treatment of chronic liver diseases  
A. Kovačević, G. Valentino and P. Luciani
46. The development of fusogenic proteoliposomes for the delivery of functional transmembrane protein: a possible role in the treatment of channelopathies  
S. Ramadan, S. Tammam, M. Boushehri, H.-G. Breitingner, U. Breitingner, S. Mansour and A. Lamprecht
47. Anchoring properties of novel hydrophilic lipopolymers post-inserted in liposomes for stealth purpose  
R. Mare, H. Da, M. Fresta, D. Cosco and V. Awasthi
48. Post-insertion efficiency of PEG-lipid derivatives in preformed liposomes  
R. Mare, F. Froiio, V. Awasthi, D. Paolino, M. Fresta and D. Cosco
49. Optimisation of the production of magneto-enzymatic sphingomyelin liposomes (MESL) by liquid extrusion  
F. Mertens, T. Peñate Medina, O. Peñate Medina and R. Scherließ
50. Modulation of dexamethasone release from lipid conjugates nanoparticles by modification of lipid linkage chemistry  
M. Rehman, N. Tsapis, S. Leperte, F. Reynaud and E. Fattal
51. Hybrid self-assembling nanoparticles to improve miRNAs delivery in glioblastoma  
L. Scotti, V. Campani, S. Zappavigna, M. Abate, M. Porru, C. Leonetti, M. Caraglia and G. De Rosa
52. Physicochemical characterization of nanostructured lipid carriers using advanced characterization tools  
C. Tetyczka, A. Hodzic, M. Kriechbaum, K. Juraic, C. Spirk, S. Hartl, E. Pritz, G. Leitinger and E. Roblegg

53. Water soluble silibinin-HP- $\beta$ -CD lyophilized product: possible protective effect under surgical liver ischemia/reperfusion conditions in rats, by decreasing TNF- $\alpha$  gene expression in the liver, kidneys and lungs  
A.-E. Georgakopoulou, A. Betsou, O. Konstandi, C. Kenoutis, N. Kostomitsopoulos, M. Pitsiakoudis, K. Simopoulos, A. Tsaroucha and G. Valsami
54. Amphiphilic dendrons for the delivery of anti TNF- $\alpha$  siRNA in the treatment of Rheumatoid arthritis  
Z. YU, L. Chen, N. Tsapis, J. Verganud, S. Mignani, J.-P. Majoral and E. Fattal
55. Drug-delivery systems for miRNAs  
A.-L. Schachner-Nedherer, O. Werzer and A. Zimmer
56. Linking microstructural analysis and drug-carrier interactions with biological activity: a study with curcumin  
I. Nikolic, E. Mitsou, D. Jasmin Lunter, V. Papadimitriou, A. Xenakis, R. Daniels and S. Savic
57. Physicochemical and structural characterization of nanostructured lipid carriers with high amount of liquid lipid intended for parenteral administration  
J. Mitrovic, J. Djokovic, B. Calija and S. Savic

## Parenteral formulations

58. Experimental design approach in developing PEG-ylated, placebo/curcumin loaded, fish/soybean oil parenteral nanoemulsions  
J. Djokovic, S. Savic, J. Mitrovic and S. Savic
59. Diclofenac prodrugs for intra-articular depot injectables: comparison of in vitro hydrolysis in human and equine plasma and synovial fluid  
I. Storgaard, S. Larsen, N. Mertz and J. Østergaard
60. UV-Vis imaging of initial leuprolide acetate release from in situ forming implants  
Z. Li, H. Mu, H. Jensen, S. Larsen and J. Østergaard
61. The influence of different batches of Vivapur 811 and their activation on the viscosity of O/W emulsions  
B. Pi Boleda, M. Suñé Pou, I. Nofreries Roig, E. García Montoya, P. Pérez Lozano, J. R. Ticó, M. Miñarro and J. M. Suñé Negre
62. Development of non-biodegradable filaments for 3D-printed implant inserts  
H. Ponsar and J. Quodbach
63. Biorelevant dissolution testing of sirolimus-eluting stents using tissue-mimicking hydrogels  
K. Prüßmann and A. Seidlitz
64. Characterization of the human vitreous body ex vivo in dependency of donor age  
S. Stein, S. Hadlich, S. Langner, A. Biesenack, N. / S. Zehm / Kruschke, M. Ölze, M. Grimm, S. Mahnhardt, W. Weitschies and A. Seidlitz
65. Continuous low-cost alternative to freeze drying: scaled-up aqueous electrospinning for cyclodextrin based reconstitution injection  
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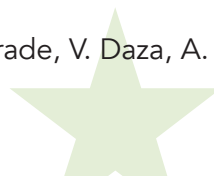
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## POSTER SESSION ON TUESDAY, 26 MARCH 2019

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.

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02. Study of equilibrium solubility measurements in lipid based formulation excipients, using the standard saturation shake-flask method  
X. Liu, D. Bar-Shalom, A. Müllertz and R. Berthelsen
03. Transformation of nanosuspension as an intermediate product into solid dosage forms to improve the drug bioavailability  
C. Bartos, R. Ambrus and P. Szabó-Révész
04. To study the robustness of a standardized pH-stat titration method for determination of in vitro digestion profiles of a self-emulsifying lipid based ibuprofen formulation  
A. Bernaerts
05. An integrated experimental and modelling approach to characterise the precipitation kinetics of compounds with poor aqueous solubility: from in vitro to in vivo predictions  
K. Box, E. Close, S. Bermingham, S. Kashiwaya and K. Tsinman
06. The effect of non-ionic carrier and preparation technology on physicochemical properties of obtained solid dispersions of posaconazole in polymer matrix  
J. Burak, K. Pietrusiak, K. Grela and B. Karolewicz
07. Evaluation of a spray drying device for pharmaceutical application  
P. da Igreja, R. Strob, A. Dobrowolski, J. F. Dräger-Gillesen and M. Thommes
08. Fundamental evaluation and characterization of itraconazole solid dispersions  
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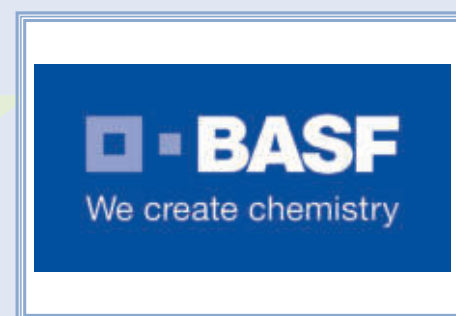
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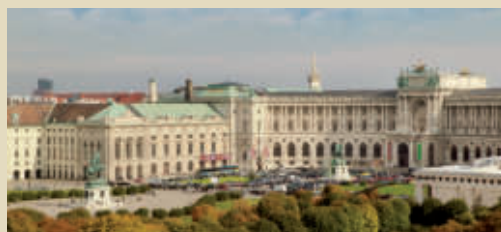
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## BOOTH 32



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## BOOTH 32



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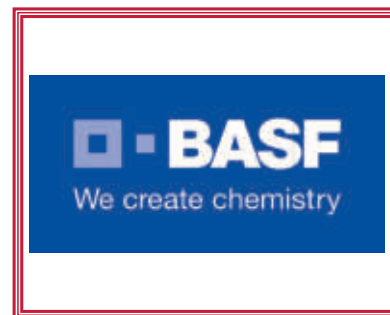
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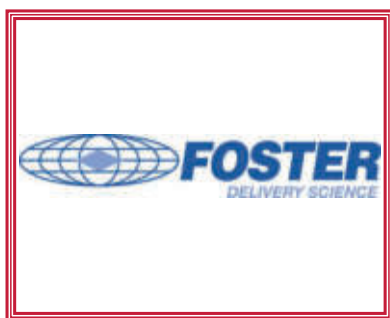


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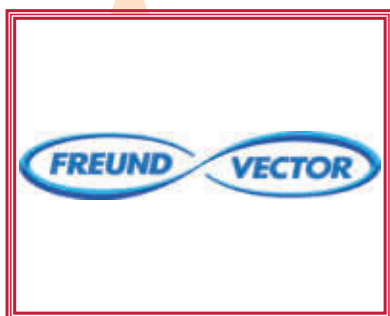


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[www.deliveryscience.com](http://www.deliveryscience.com)

## FREUND-VECTOR CORPORATION

## BOOTH 35



Freund-Vector Corporation is a full service global market leader in the design, manufacturing and marketing of solid dosage processing equipment and services for the processing of powders, particles, beads and tablets. Equipment applications include particle coating- drying- agglomerating- granulating- layering- densification and tablet coating. Markets served by Freund-Vector include the pharmaceutical, nutritional, chemical, food and confectionery industries.

Founded in 1972, Freund-Vector Corporation has over 2500 worldwide installations. Our parent company Freund Corporation of Tokyo, Japan, purchased controlling interest of Vector Corporation in 1997. Together our two companies now have over 5000 worldwide equipment installations in 51 countries of the world.

[www.freund-vector.com](http://www.freund-vector.com)

## GAMLEN TABLETING LTD

Tableting by Design™ - Test Formulations in Minutes!

We produce the Gamlen Powder Compaction Analyzer, the world's first force-controlled computerised benchtop instrument for making tablets one at a time and for material characterisation, preformulation, formulation, process development, QbD for tablets, and QC of APIs and excipients. Tablets can be made and tested in minutes.

We also supply the GTP-SafeTab, a lightweight, portable benchtop enclosure for handling highly-potent APIs, and the GamPette, a powder pipette for reliably and reproducibly delivering small volumes of powder.

[www.gamlentableting.com](http://www.gamlentableting.com)

## BOOTH 01



## GLATT GMBH

Glatt Pharmaceutical Services is the CDMO division of Glatt. We develop and produce solid pharmaceutical dosage forms as a service provider. The core areas are multiparticulates such as pellets and micropellets as well as granulates. Glatt also offers additional suitable technological solutions, for example, taste masking of human and animal medications, improvement of bioavailability and chemical stabilization of drugs.

[www.glatt.com](http://www.glatt.com)

## BOOTH 07



## GRACE GMBH

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, Grace's portfolio of solutions for the pharmaceutical industry include SYLOID® formulation excipients, SILSOL® silica-based drug delivery technologies, VYDAC® and DAVISIL® bulk chromatographic media, and custom intermediates and regulatory starting materials.

[www.grace.com](http://www.grace.com)

## BOOTH 17



## GRANUTOOLS

## BOOTH 11



Granutools improves powder understanding by delivering leading edge physical characterization tools.

Combining decades of experience in scientific instrumentation with fundamental research on powder characterization, we offer a unique set of complementary instruments.

All we do is powder flow characterization.

Named after their purpose, our instruments are tools to understand macroscopic behavior of powders.

Granuflow for flow, Granuheap for static cohesion, Granudrum for dynamic cohesion, Granupack for tap density and Granucharge for triboelectric charge measurements.

[www.granutools.com](http://www.granutools.com)

## IMA - INDUSTRIA MACCHINE AUTOMATICHE

## BOOTH 14



Established in 1961, IMA Group is world leader in the design and manufacture of automatic machines for the processing and packaging of pharmaceuticals, cosmetics, tea, coffee and food.

Its position of leadership is the result of significant investment in R&D, regular and constructive dialogue with the end users in its sectors and the Group's ability to expand internationally, conquering new markets. IMA Group owns 1,300 patents and applications for patent in the world and has launched many new machine models over the last years. Over 500 of its 4,600 workforce are designers committed to product innovation.

[www.ima.it](http://www.ima.it)

## INPROCESS-LSP

## BOOTH 33



InProcess-LSP is an entrepreneurial organization providing Process Analytical Solutions to Pharma, Life Science, Food and other industries by offering contract research, development of in/on/at or off-line analytical methods, up to the development of analytical instruments (PAT Tools) to support you in developing your products and manufacturing processes.

With our strong background in process analytics and many years of academic and industry experience you can rely on a highly skilled and experienced team of scientists and specialists supporting you in developing solutions to your challenges. You will find in us a dedicated, reliable and enthusiastic partner.

[www.inprocess-lsp.com](http://www.inprocess-lsp.com)

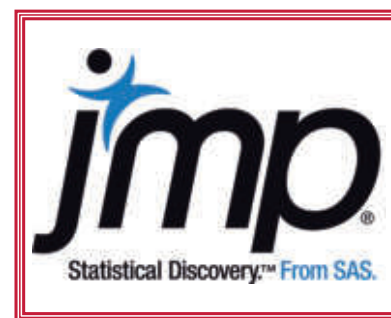
## JMP / SAS INSTITUTE SRL

## BOOTH 36

JMP® statistical discovery software from SAS is the tool of choice for scientists, engineers and analysts worldwide. JMP links dynamic data visualization with powerful statistics and predictive analytics, in memory and on the desktop. Interactive and visual, JMP reveals insights that raw tables of numbers or static graphs tend to hide. JMP simplifies data access, cleanup and processing, and makes it easy to share results. It includes comprehensive capabilities for:

- Statistical analysis.
- Predictive Modeling.
- Multivariate analysis.
- Data Visualization.
- Design of experiments, Quality & Reliability.
- Model deployment.

[www.jmp.com](http://www.jmp.com)



## KERRY

## BOOTH 16

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.sheffieldbioscience.com](http://www.sheffieldbioscience.com)



## LINKAM SCIENTIFIC INSTRUMENTS

## BOOTH 19

Linkam Scientific Instruments develop and manufacture a range of stages for thermal microscopy including the new DSC and Freeze Drying microscope systems as well as humidity control within the sample chamber. Linkam provide complete solutions for sample characterisation.

Linkam stages and systems can be used in conjunction with light microscopes, Raman, IR and other forms of spectroscopy and X-ray. Linkam stages are found in thousands of laboratories worldwide and can be used in a variety of applications across many sectors including: Pharmaceutical, Food Research, Material Characterisation, Biological Studies and many more.

[www.linkam.co.uk](http://www.linkam.co.uk)



**MAAG AUTOMATIK GMBH****BOOTH 37**

Maag is the worldwide leading manufacturer of gear pumps, pelletizing systems, filtration systems and pulverizers for demanding applications in the pharma, food, plastics, chemical and petrochemical industries. Maag develops, manufactures, and distributes innovative, customized solutions for complete pump and pelletizing systems.

Ettlinger Kunststoffmaschinen GmbH joined the Maag family in 2018. Maag is represented in the markets with its brands „Maag Pump & Filtration Systems“, „Automatik Scheer Strand Pelletizers“, „Gala Automatik Underwater Pelletizers“ and „Reduction Pulverizing Systems“.

[www.maag.com](http://www.maag.com)

**MEDELPHARM****BOOTH 15**

Since 1985 specialists in designing and manufacturing high-speed, precise and at the same time easy-to-use tableting instruments for formulation scientists and pilot plant developers around the world.

With its background from production Medelpharm has a deep understanding of tableting processes.

You are looking for assistance in powder characterization, solid dosage formulation or production trouble shooting?

Medelpharm can offer you a comprehensive portfolio of multi-functional Tableting Instruments, R&D presses and High-speed Compaction simulators as well as Process equipment and extensive Lab Services in tableting, granulation and coating.

The latest revolutionary Benchtop R&D tablet press, the STYL'One Nano is the latest example of Medelpharm's expertise.

Made by people for people

[www.medelpharm.com](http://www.medelpharm.com)

**MEGGLE EXCIPIENTS & TECHNOLOGY****BOOTH 03**

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 parenteral applications, Tailor-made lactose products.

Services: Spray drying, Co-Processing, Agglomeration, Product Customization

[www.meggle-pharma.com](http://www.meggle-pharma.com)



## MELTPREP GMBH

MeltPrep is an innovative laboratory equipment producer which has developed the first tailor made process, specialized for sample preparation of thermoplastic materials. MeltPrep offers equipment based on its patented vacuum compression molding (VCM) process. The VCM products enable the lossless and rapid production of solid samples with different, geometries starting from powder, via a fusion based method performed under vacuum. The samples mimic hot-melt extruded (HME) formulations. The source materials' characteristics are not altered as minimum shear and heat load are applied. This enables accurate material characterization of samples produced by VCM which also improves your engineering and simulation results.

Is your HME development tedious? Visit our stand and learn how to do it.

[www.meltprep.com](http://www.meltprep.com)

## BOOTH 26



## MG2

MG2. Capsule fillers & packaging technology.

Since 1966, MG2 has been a market leader in the designing and manufacturing of capsule fillers. As well as machines used to dose products into hard shell capsules and other small containers, MG2 Process 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, serialization systems for cartons, bottles and bundled products.

MG2. Keeping ahead for you.

[www.mg2.it](http://www.mg2.it)

## BOOTH 10



## MUNIT

MUNIT is a consultancy company, 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.

The triangular company structure with its back-up potential, its technology transfer and the resulting flexibility is one of our unique features in the market and an important part of customers Business continuity plan. With MUNITs lean organisation, its welcoming and customer orientated attitude, we are able to guarantee best service, high efficiency and punctuality to our customers worldwide.

[www.munit.com](http://www.munit.com)

## BOOTH 34



**NEXTPHARMA****BOOTH 25**

The European pharmaceutical full service CDMO, equipped and ready to support you along the entire product lifecycle within our standard services and niche areas such as hormones, betalactam antibiotics and controlled substances.

Pharmaceutical Development:

Formulation and process development, process validation for solids, semi-solids and liquids, Special focus on Pediatric dose development, Analytical method development & Validation, Stability testing

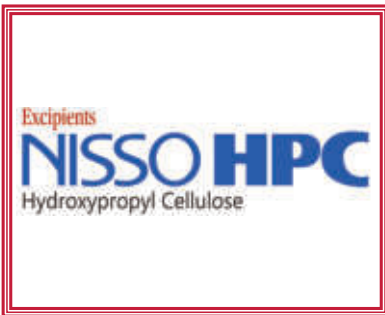
Clinical supply:

Clinical batch manufacture, Phase I – IV clinical trials supply, Worldwide distribution, Regulatory support

Commercial manufacturing:

Tablets & Film Coated Tablets, Powders, Pellets, Capsules, Semi-Solids (gels, creams, ointments), Liquids (oral liquids and suspensions, nasal sprays).

[www.nextpharma.com](http://www.nextpharma.com)

**NISSO CHEMICAL EUROPE GMBH****BOOTH 08**

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.nissoexcipients.com](http://www.nissoexcipients.com)

**OPTIMA PACKAGING GROUP GMBH****BOOTH 38**

OPTIMA Life Science

Unsurpassed flexibility for medical and pharmaceutical products

Optima Life Science offers flexible manufacturing and packaging processes, for fields as diverse as wound dressings, oral film strips (ODF) transdermal and electrode patches, and immunoassays (ELISA test kits). The division's core expertise lies web-processing technologies as well as liquid handling processes. The company develops complete automated lines with integrated packaging functions. Modular machine systems from Optima Life Science offer customers unique "plug & play" flexibility. The division guarantees quick, professional service with 14 international locations. OPTIMA Life Science is a member of the OPTIMA packaging group GmbH (Schwäbisch Hall), which employs a workforce of 2,250 around the globe.

[www.optima-packaging.com](http://www.optima-packaging.com)

## PHARMA TEST APPARATEBAU AG

## BOOTH 02

Any pharmaceutical production facility requires routine testing of physical dosage form properties as well as active pharmaceutical ingredient (API) content. Since 1979 Pharma Test has been synonymous with the development and production of high-quality test devices and systems for the Quality Control of tablets, capsules, suppositories, ampoules, bulk materials, and other solid dosage formats. Pharma Test offers a complete product range from manual, physical testing instruments to fully automated, analytical test systems to analyze the active chemical composition of a dosage form as well as its release rate.

[www.pharma-test.de](http://www.pharma-test.de)



## PION INC LTD

## BOOTH 30

Pion Inc. is a leader in developing and delivering equipment, software, services, and CRO solutions for our customers' toughest challenges. We specialize in fiber optic dissolution measurement, in situ monitoring, FLUX/permeability, and ionization.

Pion has developed two additional areas to support our customers.

- In-house CRO laboratory provides a multitude of testing options to assist with screening, solubility, FLUX (micro and macro), intrinsic dissolution, and many others.
- Field service supports many of the top pharma companies with preventative maintenance, qualification, and support services for fiber optic systems, dissolution testers, HPLC, GC, physical testing equipment, and other lab equipment.

[www.pion-inc.com](http://www.pion-inc.com)



## PROMED PHARMA

## BOOTH 27

ProMed Pharma specializes in the molding of drug-loaded silicones and thermoplastics and leverages this expertise to manufacture long-term implants and combination devices under cGMP. Working with established and early stage companies, we utilize robust manufacturing processes for controlled release of drugs utilizing a variety of materials. From clinical trial materials to commercial products, ProMed supports pharmaceutical and medical device companies developing controlled release formulations including subcutaneous, orthopedic, cardiovascular, and ophthalmic implants, intravaginal rings, and steroid-eluting components.

[www.promedpharmallc.com](http://www.promedpharmallc.com)



## QI SRL

## BOOTH 18



Qi srl produces and distributes systems for studies on physical properties of materials, like particle size, powder flowability, suspension stability, surface tension, dispersion stability studies and systems for mixing, dispersing and homogenizing, from lab scale to pilot to production scale. Qi srl also distributes systems for spray drying and congealing, fluidized bed, pan coating, extruding, compounding and granulating. Qi srl offers expertise for formulation development, troubleshooting and process optimization.

[www.qitech.it](http://www.qitech.it)

## SHIN-ETSU PFMD GMBH

## BOOTH 06



Shin-Etsu began producing pharmaceutical excipients in 1962. Shin-Etsu's cellulose excipients can make a valuable contribution in various areas of pharmaceutical technology, for example as film coatings, binders and thickeners. We will be exhibiting our L-HPC a dual-functionality excipient: binder and disintegrant, Pharmacoat® which is widely used as a binder for granulation and coating. Controlling the particle size and chemistry of the Hypromellose we can also use the Hypromellose as matrix forming agent in tablets which can give you up to 12 hours release profile depending on the formulation and API solubility, this product is under the trade name Metolose SR®. We are the main suppliers for Shin-Etsu Aqoat® (HPMCAS) and HPMCP for solid dispersion and enteric coating applications.

[www.se-pfmd.com](http://www.se-pfmd.com)

## SOTAX

## BOOTH 24



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

Providing high-quality testing solutions for pharmaceutical dosage forms such as tablets has been the expertise and passion of the SOTAX Group for more than 40 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](http://www.sotax.com)

## TESA LABTEC

tesa Labtec is the innovative pharma business of the tesa SE / Beiersdorf AG group of companies. We offer contract development and manufacturing of transdermal and topical patches, and oral soluble and buccal films. Despite current belief, our technologies are not limited to small molecules only; we are able to deliver you precious biomolecules, such as vaccines, allergens, and peptides as well. For vaccines, we are offering a great added value on economic, technological and logistical levels. We offer a one-stop shopping experience for our customers. From early development to the manufacturing of products for the market. Our two cGMP sites in Germany just recently passed the first US FDA pre-approval inspection.

[www.tesa-labtec.com](http://www.tesa-labtec.com)

## BOOTH 22



## THERMO FISHER SCIENTIFIC

Thermo Fisher Scientific has innovative solutions at every stage of the pharmaceutical process, from discovery through to production and QC. Our deep understanding of the challenges faced by producers of medicines allows us to forge partnerships that more quickly deliver next-generation drugs to market. Visit us on Booth 28 to see the latest innovations to help streamline your drug development process Characterize - understand API/excipient formulation properties Materialize - produce extruded solid dosage forms (eg. Implants, pellets etc.) Analyze - evaluate your solid formulations post-extrusion using a variety of techniques

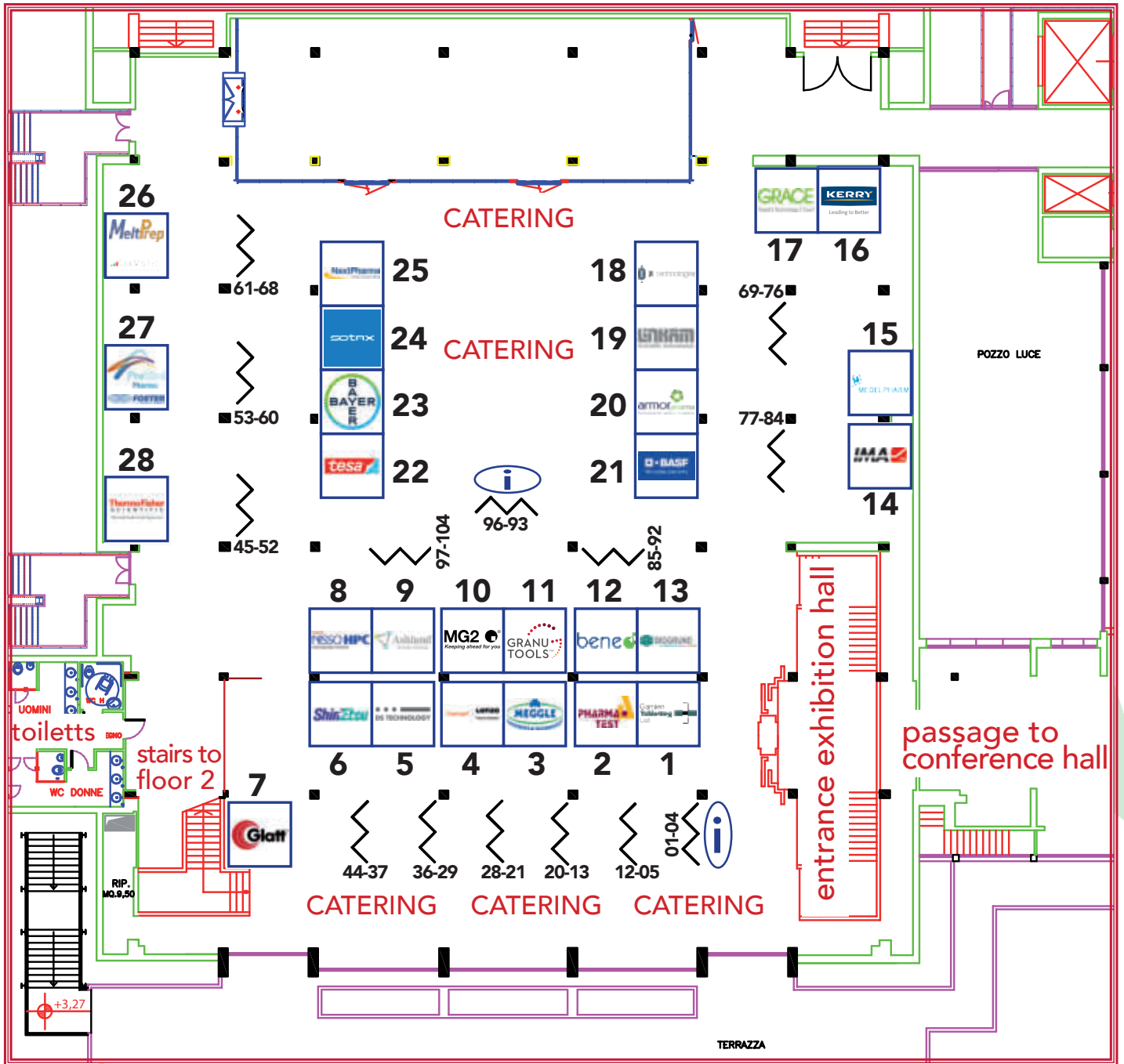
[www.thermofisher.com/drugformulation](http://www.thermofisher.com/drugformulation)

## BOOTH 28



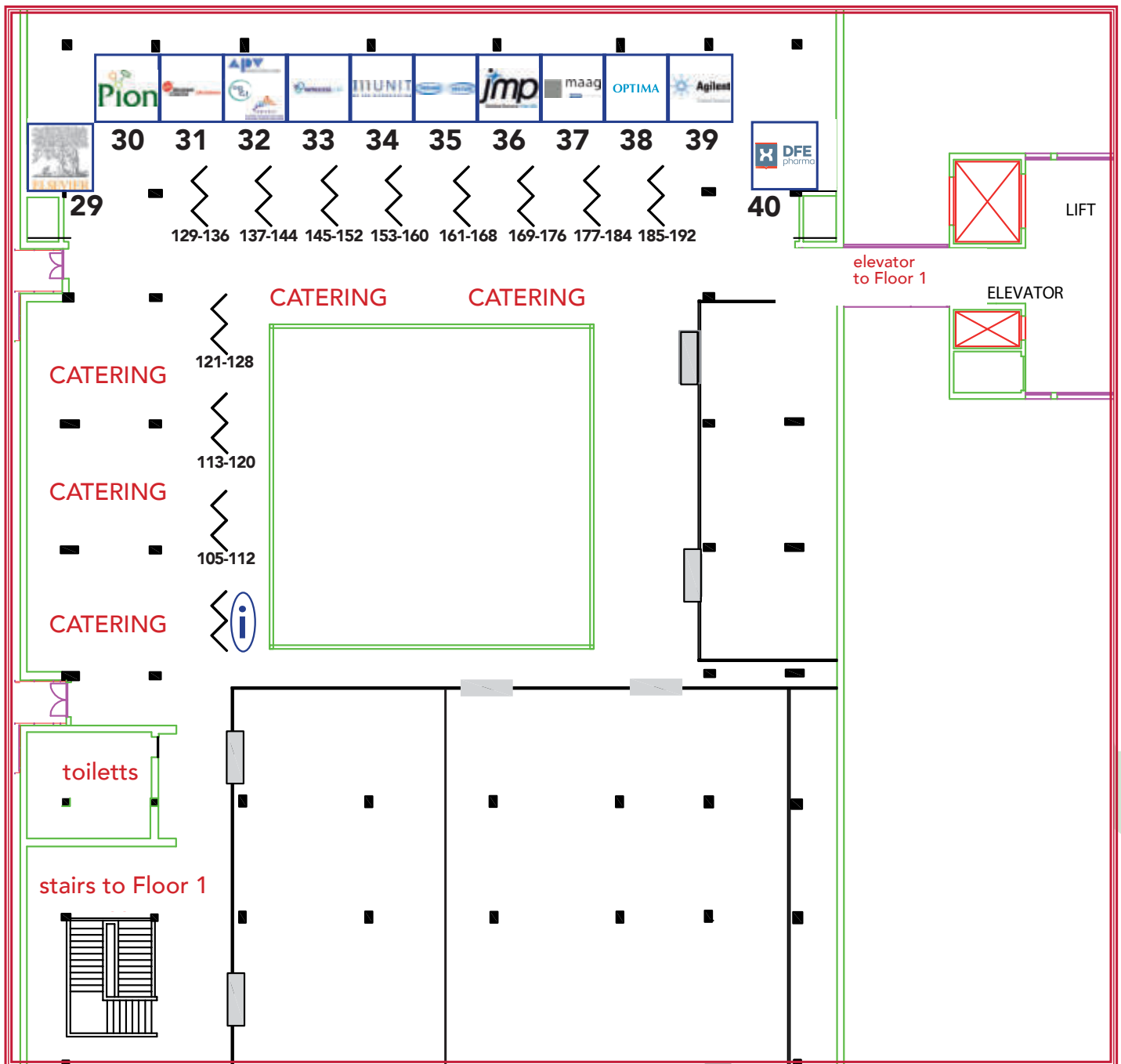


FIRST FLOOR



COMPANY	BOOTH NO	COMPANY	BOOTH NO	COMPANY	BOOTH NO
ADRI TELF / APGI / APV	32	FOSTER DELIVERY SCIENCE	27	MELTPREP	26
AGILENT	39	FREUND-VECTOR CORP.	35	MG2	10
AMOR PHARMA	20	GAMLEN TABLETING LTD	01	MUNIT SA	34
ASHLAND	09	GLATT PHARMA SERVICES	07	NEXTPHARMA	25
BASF	21	GRACE GMBH	17	NISSO CHEMICAL	08
BAYER	23	GRANUTOOLS	11	OPTIMA LIFE SCIENCES	38
BECKMAN COULTER	31	IMA S.P.A.	14	PHARMA TEST	02
BENEO GALENIQ™	12	INPROCESS-LSP	33	PION	30
BIOGRUND GMBH	13	JMP / SAS INSTITUTE SRL	36	PROMED PHARMA	27
CAPSUGEL LONZA	04	KERRY	16	QI SRL	18
COLVISTEC AG	26	LINKAM SCIENTIFIC	19	SHIN-ETSU PFMD	06
DFE PHARMA	40	MAAG AUTOMATIK GMBH	37	SOTAX	24
DS TECHNOLOGY	05	MEDELPHARM	15	TESA LABTEC	22
ELSEVIER	29	MEGGLE	03	THERMO FISHER SCIENTIFIC	28

SECOND FLOOR



COMPANY	BOOTH NO	COMPANY	BOOTH NO	COMPANY	BOOTH NO
ADRITELF / APGI / APV	32	FOSTER DELIVERY SCIENCE	27	MELTPREP	26
AGILENT	39	FREUND-VECTOR CORP.	35	MG2	10
AMOR PHARMA	20	GAMLEN TABLETING LTD	01	MUNIT SA	34
ASHLAND	09	GLATT PHARMA SERVICES	07	NEXTPHARMA	25
BASF	21	GRACE GMBH	17	NISSO CHEMICAL	08
BAYER	23	GRANUTOOLS	11	OPTIMA LIFE SCIENCES	38
BECKMAN COULTER	31	IMA S.P.A.	14	PHARMA TEST	02
BENEIO GALENIQ™	12	INPROCESS-LSP	33	PION	30
BIOGRUND GMBH	13	JMP / SAS INSTITUTE SRL	36	PROMED PHARMA	27
CAPSUGEL LONZA	04	KERRY	16	QI SRL	18
COLVISTEC AG	26	LINKAM SCIENTIFIC	19	SHIN-ETSU PFMD	06
DFE PHARMA	40	MAAG AUTOMATIK GMBH	37	SOTAX	24
DS TECHNOLOGY	05	MEDELPHARM	15	TESA LABTEC	22
ELSEVIER	29	MEGGLE	03	THERMO FISHER SCIENTIFIC	28

# Monday, 25 March 2019

Floor 1 & Floor 2		Europauditorium	Sala Italia
Poster session and exhibition		Invited talks: Manufacturing equipment and technologies	Short talks: Dermal and transdermal preparations // Mucosal drug delivery
09:00 - 09:30	Europauditorium	Opening ceremony	
09:30 - 10:30	Europauditorium	Plenary lecture: Cytosolic delivery of bio-therapeutics: the struggle with biological barriers goes on Stefaan de Smedt, University of Ghent, Belgium	
10:30 - 11:00	Floor 1 & Floor 2	Coffee break with poster session and exhibition	
11:00	Cellular drug transport In vivo - in vitro correlations	Continuous drug product manufacturing - what does the future of pharmaceutical manufacturing look like? Giustino di Pretoro, Johnson & Johnson, Belgium	Enhancement of skin penetration of lipid-based nanocarriers Coralie Bellefroid, University of Liege, Belgium
11:20	Pharmaceutical manufacturing and engineering II Physical pharmacy		Glycosaminoglycans based scaffolds for wound healing Giuseppina Sandri, University of Pavia, Italy
11:40	Nanoformulations I Parenteral formulations	Containment of highly potent compounds during manufacturing of solid dosage forms: in the past, at present and where will this all go to? Iris Ziegler, Corden Pharma, Germany	Development of dissolving microneedles for delivery of vancomycin hydrochloride Delly Ramadan, Queens University of Belfast, United Kingdom
12:00	Ocular drug delivery Preformulation Oral delivery		Established and innovative buccal dosage forms controlling oromucosal lidocaine permeation Dina Kottke, University of Düsseldorf, Germany
12:20	Buccal and nasal drug delivery Printing technologies	The role of primary packaging in biotech drug stability: innovative solutions Odra Pinato/Annalisa Delnevo, Stevanato Group, Italy	Oral self-emulsifying drug delivery system and intranasal nanoemulsions of phenytoin Adriana Santos, University of Beira Interior, Portugal
12:40	Protein formulations and aggregation Pulmonary drug delivery		High dose tobramycin dry powder inhaler: in vivo-in vitro dose emission Paolo Colombo, University of Parma, Italy
13:00 - 15:00	Floor 1 & Floor 2	Lunch with poster session and exhibition	
Poster session and exhibition		Invited talks: Nanomedicines	Short talks: Bioavailability and IVVC // Pharmaceutical manufacturing and engineering
15:00	Cellular drug transport In vivo - in vitro correlations	New polymer-based drug delivery systems for cancer therapy Julien Nicolas, University of Paris-Sud, France	In vitro and in vivo assessment of different enabling approaches for oral delivery of fenofibrate Ana Calduch-Arques/Anette Müllertz, University of Copenhagen, Denmark
15:20	Pharmaceutical manufacturing and engineering II Physical pharmacy		Improved vitamin K uptake from orally administered mixed micelles under bile deficient conditions Thijs Rooimans, University of Utrecht, Netherlands
15:40	Nanoformulations I Parenteral formulations	Drug product nanotechnologies: formulation and process aspects from laboratory to production plant Paolo Gatti, Aptuit, Italy	A novel predictive dissolution method for establishing an IVVC for contraceptive intravaginal rings Katharina Tietz, University of Greifswald, Germany
16:00	Ocular drug delivery Preformulation Oral delivery		The Manufacturing Classification System: factors influencing process choices Neil Dawson, Pfizer Worldwide Research & Development, United Kingdom
16:20	Buccal and nasal drug delivery Printing technologies	Neurotrophic factor brain delivery for Parkinson's disease therapy Maria José Blanco-Prieto, University of Navarra, Spain	Lean and efficient development of a pseudoephedrine formulation resistant to conversion into meth Isabella Immohr, Grünenthal GmbH, Germany
16:40	Protein formulations and aggregation Pulmonary drug delivery		Solvent-induced phase separation during ASD preparation Gabriele Sadowski, University of Dortmund, Germany

Floor 1 & Floor 2		Europauditorium	Sala Italia	
Poster session and exhibition		Invited talks: Arising new manufacturing technologies	Short talks: Oral drug delivery	
Bioavailability and absorption enhancement		Electrospinning and its applications in pharmaceuticals Romána Zelkó, Semmelweis University, Hungary	Mathematical modelling of antibacterial release from a biphasic gel system Mario Grassi, University of Trieste, Italy	09:00
Nanoformulations II			Prilling of API/FA suspensions: Screening of additives for drug release modification Elien De Coninck, University of Ghent, Belgium	09:20
Controlled drug delivery				
Regulatory affairs		Electrospraying in drug formulation Guy van den Mooter, University of Leuven, Belgium	Adipic acid/Saccharin based celecoxib eutectic mixtures for improvement of wettability and dissolution rate Sharif Md Abuzar, University of Yonsei, Republic of Korea	09:40
Pediatric and geriatric drug delivery				
Pharmaceutical manufacturing and engineering I			Comparison of different dosage forms to deliver extremely oxygen-sensitive probiotics Odile Chambin, University of Bourgogne Franche-Comté, France	10:00
Pharmaceutical manufacturing and engineering III				
Dermal and transdermal		From 3D- to 4D-printing in the development of drug delivery systems Alice Melocchi, University of Milan, Italy	Scaled up solid formulation of living anaerobic bacteria for oral delivery using electrospinning Panna Vass, University of Budapest, Hungary	10:20
Green and sustainable pharma				
Quality control and PAT			Utilising co-axial electrospinning as a taste-masking technology for paediatric drug delivery Hend Abdelhakim, University College London, United Kingdom	10:40
11:00 - 11:30	Floor 1 & Floor 2	Coffee break with poster session and exhibition		
11:30 - 12:00	Europauditorium	Awards		
12:00 - 13:00	Europauditorium	Plenary lecture: From the idea to the bedside: is the regulatory path coherent with patients' expectations? Paola Minghetti, University of Milan, Italy		
13:00 - 15:00	Floor 1 & Floor 2	Lunch with poster session and exhibition		
Poster session and exhibition		Invited talks: Advances in oral drug delivery	Short talks: Nanoformulations	
Bioavailability and absorption enhancement		Novel in vitro test methods for predicting the performance of oral dosage forms in the gastrointestinal tract Werner Weitschies, University of Greifswald, Germany	Chemical reaction-free coating of biodegradable nanoparticles with hyaluronic acid. Cell uptake experiments and mathematical modeling Marco Biondi, University of Napoli, Italy	15:00
Nanoformulations II			Multicellular spheroid based on a triple co-culture: a novel 3D-model to mimic pancreatic tumor complexity Simona Mura, University of Paris-Sud, France	15:20
Controlled drug delivery				
Regulatory affairs		New insights into tablet porosity and its critical role in oral drug delivery Axel Zeitler, University of Cambridge, United Kingdom	The effect of PEG geometry on the circulation properties of polymeric micelles Marzieh Najafi, University of Utrecht, Netherlands	15:40
Pediatric and geriatric drug delivery				
Pharmaceutical manufacturing and engineering I			A new theranostic system for the treatment of inflammatory diseases Sara Baldassari, University of Genova, Italy	16:00
Pharmaceutical manufacturing and engineering III				
Dermal and transdermal		Innovation in solid oral dosage forms - an industrial view Marc Schiller, Grünenthal GmbH, Germany	Theranostic nanocarriers loaded with nerve growth factor enable enhanced brain recovery after stroke Matthias G. Wacker, Fraunhofer IME, Germany	16:20
Green and sustainable pharma				
Quality control and PAT			Evaluation of liposomes as antisense therapy vectors for the treatment of preeclampsia Karine Andrieux, University of Paris Descartes, France	16:40

# A selection of Elsevier's Pharmaceutical journals

## Advanced Drug Delivery Reviews



2017  
CiteScore™  
**12.66**  
Powered by Scopus®

2017 Journal Impact Factor  
**13.660**  
\*2018 Journal Citation Reports®  
(Clarivate Analytics, 2019)

A forum for the critical analysis of advanced drug and gene delivery systems and their applications in human and veterinary medicine.

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## European Journal of Pharmaceutical Sciences



2017  
CiteScore™  
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2017 Journal Impact Factor  
**3.466**  
\*2018 Journal Citation Reports®  
(Clarivate Analytics, 2019)

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