

**Braunschweig International Symposium on
Pharmaceutical Engineering Research SPHERE
October 19 and 20, 2015**

Sunday, Oct. 18, 2015

17:00 – 18:00 Registration
19:00 Get together

Monday, Oct. 19, 2015

08:30 – 09:00 Registration
09:00 – 09:30 Opening, welcome addresses

09:30 – 10:30 Session I – Production of pharmaceuticals

9:30-10:10 Keynote lecture
G. Bejeuhr; vfa.Die forschenden Pharmaunternehmen, Berlin
Production of innovative medicinal products in Germany - an industry view

10:10-10:40 Invited lecture
J. Bartholomäus; pharmakreativ / TU Braunschweig (Institute for Pharmaceutical Technology), Braunschweig
Challenges in Design and Process Development of Dose Sipping Technology Products

10:40 – 11:00 *Coffee Break*

11:00 – 12:30 Session II - Production processes for biopharmaceuticals

11:00-11:30 Invited lecture
L. Thomas; Amino GmbH, Frellstedt
Biotechnological production and purification of amino acids: challenges and chances for an SME

11:30-11:50 S. Duvar, M. Heine, V. Hecht, H. Ziehr
Fraunhofer Institute for Toxicology and Experimental Medicine (ITEM;
Pharmaceutical Biotechnology Division), Braunschweig
Evaluation of different cell culture retention systems for perfusion

11:50-12:10 M. Gaid^{1,3}, P. Haas^{2,3}, T. Beuerle^{1,3}, S. Scholl^{2,3}, L. Beerhues^{1,3}
TU Braunschweig (¹Institute for Pharmaceutical Biology, ²Institute for Chemical
and Thermal Process Engineering, ³Center of Pharmaceutical Engineering (PVZ))
Hypericum root cultures for production of hyperforin

12:10-12:30 J. Gädke^{1,4,5}, I.-C. Masthoff^{2,4}, R. Biedendieck^{3,4,5}, G. Garnweitner^{2,4}, R. Krull^{1,4,5}
TU Braunschweig (¹Institute of Biochemical Engineering, ²Institute for Particle
Technology, ³Institute of Microbiology, ⁴Center of Pharmaceutical Engineering
(PVZ), ⁵Braunschweig Integrated Center of Systems Biology (BRICS))
*In situ-purification of His-tagged products using recyclable functionalized
supraparamagnetic iron oxide nanoparticles in Bacillus megaterium*

12:30 – 14:00 *Lunch break*

14:00 – 16:30	Poster session
14:00-15:00	Poster short presentations
15:00-16:30	Poster discussion <i>with coffee served</i>
16:30 – 18:00	Session III - Advanced design and processing of solid and liquid formulations
16:30-17:00	Invited lecture M. Juhnke; Novartis Pharma AG (Technical R&D), Basel/Switzerland <i>Particle Engineering of New Chemical Entities during Drug Development</i>
17:00-17:20	<u>S. Schiller</u> ^{1,2} , A. Hanefeld ¹ , M. Schneider ² , C.-M. Lehr ^{2,3} ¹ Merck Serono (Research Pharmaceuticals & Drug Product Development), Darmstadt ² Saarland University (Department of Pharmacy, Biopharmaceutics & Pharmaceutical Technology), Saarbrücken ³ Helmholtz Institute for Pharmaceutical Research Saarland (HIPS; Department of Drug Delivery (DDEL)), Saarbrücken <i>Focused ultrasound as a scalable and contact-free method to manufacture protein-loaded PLGA nanoparticles</i>
17:20-17:40	J. Wesholowski ¹ , E. Reitz ² , <u>M. Thommes</u> ¹ ¹ TU Dortmund (Institute of Solids Process Engineering), ² Heinrich-Heine-University Düsseldorf (Institute of Pharmaceutics and Biopharmaceutics) <i>Residence time in pharmaceutical extrusion: Modelling and determination</i>
17:40-18:00	<u>S. Gehrman</u> ^{1,3} , K. Lippe ² , D. Steiner ^{2,3} , A. Kwade ^{2,3} , H. Bunjes ^{1,3} TU Braunschweig (¹ Institute for Pharmaceutical Technology, ² Institute for Particle Technology, ³ Center of Pharmaceutical Engineering (PVZ)) <i>Influence of membrane material during the production of nanoemulsions by premix membrane emulsification</i>
18:00	End of lectures day I
19:00	Conference Dinner

Tuesday, Oct. 20, 2015

08:30 – 10:30	Session IV - Advanced design and processing of solid and liquid formulations (contd.)
08:30-09:10	Keynote lecture J. Breitzkreutz; Heinrich-Heine University Düsseldorf (Institute for Pharmaceutical Technology and Biopharmacy) <i>Individual Dosing of Liquid and Solid Preparations</i>
09:10-09:30	C. Olbrich; Bayer HealthCare (External Networks & Scouting), Berlin <i>Particles in protein formulations - a challenging field of interest and understanding</i>
09:30-09:50	<u>M. Bogdahn</u> , T. Auel, W. Weitschies Ernst-Moritz-Arndt University Greifswald (Institute of Pharmacy, Biopharmaceutics and Pharmaceutical Technology) <i>Pressure sensitive capsule shells manufactured with 3D printing technique</i>

09:50-10:10	<u>D. Lunter</u> , R. Heck, R. Daniels Eberhard Karls University Tuebingen (Department of Pharmaceutical Technology) <i>Film forming formulations with sustained release for the treatment of chronic skin diseases</i>
10:10-10:30	<u>D. Steiner</u> ^{1,2} , J. H. Finke ^{1,2} , A. Kwade ^{1,2} TU Braunschweig (¹ Institute for Particle Technology, ² Center of Pharmaceutical Engineering (PVZ)) <i>Efficient production of nanoparticle-loaded orodispersible films by process integration in a stirred media mill</i>
10:30 – 11:00	Coffee Break
11:00 – 12:00	Session V – Synthesis and downstream processing of APIs
11:00-11:20	<u>M. Meise</u> ^{1,3} , M. Schoenitz ¹ , J. C. Kuschnerow ¹ , A. Eckert ¹ , C. Schmale ¹ , C. Kunick ^{2,3} , S. Scholl ^{1,3} TU Braunschweig (¹ Institute for Chemical and Thermal Process Engineering, ² Institute for Medicinal and Pharmaceutical Chemistry, ³ Center of Pharmaceutical Engineering (PVZ)) <i>Early process development of scaleable synthesis for poorly water-soluble API</i>
11:20-11:40	K. Hudel; Martin Christ Gefriertrocknungsanlagen GmbH, Osterode <i>Lyophilization in Pharma and Biotech – from Lab to production scale</i>
11:40-12:00	<u>P. Gronemeyer</u> ^{1,2} , J. Strube ^{1,2} ¹ TU Clausthal (Institute for Separation and Process Technology), ² TU Braunschweig (Center of Pharmaceutical Engineering (PVZ)) <i>Manufacturing of monoclonal antibodies and their fragments</i>
12:00 – 13:00	Lunch Break
13:00 – 15:00	Session VI - Microsystems for continuous processing and screening
13:00-13:40	Keynote lecture A. J. deMello; ETH Zürich (Institute for Chemical and Bioengineering, Dept. of Chemistry and Applied Biosciences) <i>Droplet-based microfluidics: towards ultra high-throughput chemistry and biology</i>
13:40-14:10	Invited lecture T. P. Burg; MPI for Biophysical Chemistry Göttingen (Max-Planck Research Group Micro and Nanotechnology) <i>Microfluidic technologies for nanoparticle characterization and microscopy</i>
14:10-14:40	R. Horland; TissUse GmbH, Spreeenhagen <i>Multi-Organ-Chip developments: Towards a paradigm shift in drug development</i>
14:40-15:00	<u>J.H. Finke</u> ^{1,2} , T. Gothsch ^{1,2} , C. Richter ^{2,3} , M. Schrader ^{1,2} , J.-W. Thies ^{2,3} , A. Dietzel ^{2,3} , S. Büttgenbach ^{2,3} , C.C. Müller-Goymann ^{2,4} , A. Kwade ^{1,2} TU Braunschweig (¹ Institute for Particle Technology, ² Center of Pharmaceutical Engineering (PVZ), ³ Institute of Microtechnology, ⁴ Institute for Pharmaceutical Technology) <i>Modular microsystems for the screening of colloidal drug delivery formulations – a focus on the flow</i>
15:00-15:10	Closing Session
15:10	Adjourn