October 4, 2021

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>13:30 – 16:45</td>
<td><strong>Continuous Manufacturing &amp; Real-Time Quality Sensing</strong></td>
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<tr>
<td><strong>Day I:</strong></td>
<td>Session chair: Prof. Thomas de Beer (Ghent University, Belgium)</td>
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<tr>
<td>13:30 - 14:00</td>
<td>Poster presenters available at the chat.</td>
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<tr>
<td>14:00 - 14:05</td>
<td>Welcome to the meeting and Day 1</td>
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<tr>
<td>14:05 - 14:30</td>
<td>From Product Understanding to Real-time Quality Sensing of Pharmaceutical Tablets</td>
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<td>14:30 - 14:40</td>
<td>Discussion</td>
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<tr>
<td>14:40 - 15:05</td>
<td>Product temperature control via thermal imaging during continuous freeze-drying of pharmaceutical unit doses</td>
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<td>15:05 - 15:15</td>
<td>Discussion</td>
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<tr>
<td>15:15 - 15:25</td>
<td>Optical Coherence Tomography (OCT) for Real-Time Monitoring of Coating Process Dynamics &amp; Product Quality</td>
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<td>15:25 - 15:35</td>
<td>Determination and understanding of lead-lag between in-line NIR tablet press feed frame and off-line NIR tablet measurements</td>
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<td>15:35 - 15:45</td>
<td>Coffee and tea break</td>
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**Real-Life Continuous Tablet Manufacturing - Case Examples & Virtual Tours**
Moderator, Prof. Thomas de Beer (Ghent University, Belgium)

<table>
<thead>
<tr>
<th>Time</th>
<th>Virtual Tour</th>
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<tr>
<td>15:45 - 16:00</td>
<td>Virtual Tour 1: Continuous Tablet Manufacturing Plant – Opportunities and Implementation Challenges</td>
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<td>Assoc Dir/CoE Lead Kristina Roos-Rydel and Dr Håkan Wikström, (AstraZeneca Gothenburg)</td>
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<td>16:00 - 16:15</td>
<td>Virtual Tour 2: Review of 5 years Commercial Continuous Manufacturing at TEVA</td>
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<td>Wayne Sinclair, (TEVA)</td>
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<td>16:15 - 16:30</td>
<td>Virtual Tour 3: Demonstration of the GEA intensified Continuous Tablet Coating process for R&amp;D, Clinical and Full Scale Manufacturing</td>
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<td>Sales Mgr Troels Pedersen, (GEA)</td>
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<td>16:30 - 16:45</td>
<td>Roundtable discussion – Real-Life Continuous Manufacturing</td>
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<td></td>
<td>Prof. Thomas de Beer (Ghent University, Belgium) and all speakers</td>
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<td>16:45</td>
<td>Closure of day 1</td>
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**October 5, 2021**

**13:30 – 16:45  Design & Manufacturing of Complex Bio Products & Vaccines**  
Session chair:  
**Jarkko Ketolainen, University of Eastern Finland**

13:30 - 14:00  
Poster presenters available at the chat.

14:00 - 14:05  
**Welcome to the meeting and Day 2**  
*Jarkko Ketolainen, UEF*

14:05 - 14:30  
**COVID-19 Vaccine Design and Manufacturing Aspects**  
Prof Camilla Foged (University of Copenhagen, Denmark)

14:30 - 14:35  
**Discussion**

14:35 - 15:00  
**Use of near infrared camera for At-Line analysis of moisture content in vaccine cakes after freeze-drying**  
*André Kapitan (GSK Vaccines, Belgium)*

15:00 - 15:05  
**Discussion**

15:05 - 15:30  
**Next Generation Manufacturing at Biogen – PAT as an Enabler for Enhanced Process Control in Commercial Antibody Manufacture**  
Dr Oliver Steinhof (Biogen, Switzerland)

15:30 - 15:35  
**Discussion**

15:35 - 15:45  
**Aqueous heat method for the preparation of polymer-grafted liposomes: evaluation of their characteristics and toxicity in vitro**  
*Dr. Natassa Pippa, (National and Kapodistrian University of Athens, Greece)*

15:45 – 15:50  
**Coffee and tea break**

15:50 - 16:00  
**Systematic Approach for Modelling and Control of Continuous Pharmaceutical Processes**  
*Dr. Jacob Rehrl, (RCPE GmbH Graz, Austria)*

16:00 – 16:20  
**Roundtable discussion – Manufacturing of Complex Bio Products & Vaccines**

16:20 - 16:45  
**Poster session**  
QUIZ - interactive mingling - posters

16:45  
**Closure of day 2**
October 6, 2021

13:30 – 16:45  Futuristic Product Manufacturing & Additive Manufacturing
Day III:
Session chair:
Jukka Rantanen, University of Copenhagen (UCPH)

13:30 - 14:00  Poster presenters available at the chat.

14:00 - 14:05  Welcome to the meeting and Day 3
Jukka Rantanen, UCPH

14:05 - 14:30  A 10th Anniversary Foresight on Manufacturing Innovation – Putting PAT in Perspective
Prof Staffan Folestad, (AstraZeneca, Sweden)

14:30 - 14:40  Discussion

14:40 – 15:05  Future Manufacturing of Pharmaceuticals
Prof Frantisek Stepanek, (University of Chemistry and Technology, Prague, Czechia)

15:05 – 15:15  Discussion

15:15 - 15:25  Opening up the pharmaceutical formulation space for Additive Manufacturing
Dr. Elke Prasad, (University of Strathclyde Glasgow, UK)

15:25 - 15:35  Design of 3D-printed tablets for personalized medicine and their dissolution behaviour: solving the forward and inverse problems
Dr. Zdenek Grof, (University of Chemistry and Technology Prague, Czechia)

15:35 - 15:45  Coffee and tea break

15:45 - 15:55  Near-Infrared Hyperspectral Imaging as a Monitoring Tool for On-Demand Manufacturing of Inkjet-Printed Formulations
Dr. Sandra Stranzinger, (Research Center Pharmaceutical Engineering GmbH, Austria)

15:55 - 16:05  Preparation and characterization of resveratrol nanosuspension loaded orodispersible films
Dr. Samet Özdemir, (Istanbul Health and Technology University, Turkey)

16:05 - 16:20  Virtual Tour AM: Host, Prof Anette Larsson (Chalmers University of Technology/Nordic PoP)

16:20 – 16:35  Roundtable discussion – DAY 3
Jukka Rantanen, UCPH and all speakers

16:35 - 16:45  Closing Remarks for the EUPAT10
List of Posters

**Eduardo Díaz-Torres**, (University of La Laguna, Spain), "Pressure under control in semi-solid extrusion 3D printing technology using an instrumented plunger"

**Elizaveta Mutylo**, (University of Chemistry and Technology, Prague), "Mini-tablets for the easier oral administration of bisoprolol fumarate"

**Ondrej Rychecky**, (University of Chemistry and Technology Prague, Czechia), "DOil marbles with abiraterone acetate: in vivo testing and manufacturing"

**Mikkel Herzberg**, (University of Copenhagen, Denmark), "Effect of pH on mobility at molecular crystal surfaces"

**Brian Kerins**, (University College Cork, UK), "Continuous feeding a cohesive excipient: Feeding mesoporous silica using a loss-in-weight feeder"

**Yingya Wang**, (University of Copenhagen, Denmark), "Application of powder-bed 3D printing for designing a fast disintegrating solid product"

**Ilari Ahola**, (University of Copenhagen, Denmark), "Development of non-destructive methods for the quantification of printable pharmaceuticals"

**João Basso**, (University of Coimbra, Portugal), "Expediting Disulfiram Assays through a Systematic Analytical Quality by Design Approach"

**Jenna Lyytikäinen**, (University of Eastern Finland, Finland), “Process parameter optimization of a continuous direct compression process”

**Georgios Eleftheriadis**, (Aristotle University of Thessaloniki, Greece), “Pharmaceutical Product Design via 3D printing”

**Bence Sipos**, (University of Szeged, Hungary), “QbD-based risk assessment on nasally administered polymeric micelles containing Meloxicam”

**Zsófia Németh**, (University of Szeged, Hungary), “Updated Risk Assessment-based liposome design & development”