***Preliminary Program***

*(January 10, 2020)*

# Pharmaceutical Engineering:

# At the Frontier of Drug Substance and Drug Product

**May 3-7, 2020**

**Kloster Irsee
Irsee, Germany**

**Conference Chairs**

**Daniel S. Hsieh (retired from BMS)**

Bristol-Myers Squibb, USA

**San Kiang**

Porton Pharmatech Co. Ltd, USA

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**Engineering Conferences International**

**32 Broadway, Suite 314 - New York, NY 10004, USA**

**www.engconfintl.org –** **info@engconfintl.org**

**Sunday, May 3, 2020**

16:00 - 18:00 Conference Check-in

18:00 - 19:00 Organ Concert:

Roland Götz (Organist) will play on the historic organ of the monastery church

19:00 - 21:00 Dinner (Kloster Irsee Restaurant)

21:00 - 22:00 Reception (Bierstube/Stiftskeller)

***NOTES***

* *Audio, still photo and video recording by any device (e.g., cameras, cell phones, laptops, PDAs, watches) is strictly prohibited during the technical sessions, unless the author and ECI have granted prior permission.*
* *Speakers – Please have your presentation loaded onto the conference computer prior to the session start (preferably the day before).*
* *Speakers – Please leave discussion time as previously directed by your session chair.*
* *Please do not smoke at any conference functions.*
* *Turn your mobile telephones to vibrate or off during technical sessions.*
* *Please write your name on your program so that it can be returned to you if lost or misplaced.*
* *After the conference, ECI will send an updated participant list to all participants. Please check*

*your listing now and if it needs updating, you may correct it at any time by logging into your ECI account.*

**Monday, May 4, 2020**

07:00 – 08:30 Breakfast

08:30 – 09:00 **Conference Overview**

 “Themes”, Dr. San Kiang, Conference Co-Chair

 “Publication”, Professor Myerson, Editor-in-Chief

 “ECI Introduction”, Dr. Norman Li, ECI Technical Liaison

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|  | **Session 1: Role of Particle Engineering** |
|  | Bing-Shiou Yang, Boehringer Ingelheim Pharmaceuticals, Inc. USA |
| 09:00 – 09:45 | Allan Myerson, Massachusetts Institute of Technology, USA |
|  | Continuous Crystallization and Purification: Continuous Crystallization and Purification: The role of Impurity Incorporation Mechanism in Non-Equilibrium Processes |
| 09:45 – 10:30 | Christopher Burcham, Eli Lilly and Company, USA |
|  | Examples of Particle Engineering to Improve Patient Outcomes and Product Manufacturing |
| 10:30 – 11:00 | Tea/Coffee Break |
| 11:30 – 11:45 | Marco Mazzotti, ETH Zurich, Switzerland |
|  | Size and Shape Engineering of Needle-like Crystals |
| 11:45 – 12:30 | Jian Wang, J-Star Research, Inc., USA |
|  | Bridging the Gap between API and Drug Product via Coprocessing |
| 12:30 – 14:00 | Lunch |
|  | **Session 2: Role of Particle Engineering**  |
|  | Bing-Shiou Yang, Boehringer Ingelheim Pharmaceuticals, Inc. USA |
| 14:00 – 14:45 | Zoltan Nagy, Purdue University, USA |
|  | Novel Process Intensification Approaches to Integrate Drug Substance and Drug Product Manufacturing |
| 14:45 – 16:00 | Fred Nordstrom, Boehringer Ingelheim Pharmaceuticals, Inc. USA |
|  | Root-cause analysis across the DS-DP interface in the pharmaceutical development and manufacturing |
| 16:00 – 16:30 | Tea/Coffee Break |

 **Session 3: Pharmaceutical Composite Materials**

 Deniz Erdemir, Bristol Myers Squibb, USA

16:30 – 17:15 Deniz Erdemir, Bristol Myers Squibb, USA

Co-Processing Methodologies to Improve Powder Properties of Drug Substances

17:15 – 18:00 Korbinian Löbmann, University of Copenhagen, Denmark

Co-Amorphous Systems and Multicomponent Amorphous Mixtures

19:00 – 20:30 Dinner

20:30 – 22:30 Oral Presentation/Poster Session

**Tuesday, May 5, 2020**

07:00 – 08:30 Breakfast

 **Session 4: Pharmaceutical Composite Materials**

Deniz Erdemir, Bristol Myers Squibb, USA

08:30 – 09:15 Changquan Calvin Sun, University of Minnesota, USA

Challenges and Opportunities in Optimizing Mechanical Properties of Drugs by Incorporating Excipients.

09:15 – 10:00 Saif A Khan, National University of Singapore, Singapore

Drug Particle Engineering Using Microfluidic Emulsion-Based Crystallization

10:00 – 10:30 Tea/Coffee Break

10:30 – 11:15 Rajesh Dave, New Jersey Institute of Technology, USA

Predictively Enhancing Bulk Properties of Cohesive Pharmaceutical Powders

11:15 – 12:00 Patrick Doyle, Massachusetts Institute of Technology, USA

 New API formulations enabled by soft matter concepts

12:15 – 18:00 Optional excursion

19:00 – 20:30 Dinner

20:30 – 22:30 Oral Presentation/Poster Session

**Wednesday, May 6, 2020**

07:00 – 08:30 Breakfast

**Session 5:** **Material Science - Advances in Characterization of Engineered Materials**, Alfred Lee, Merck & Co., Inc. USA

08:30 – 09:15 Simon J. L. Billinge, Columbia University, USA

 Advanced X-Ray Analysis of Disordered and Composite Materials

09:15 – 10:00 Clare Strachan, University of Helinski, Finland

 Application of Non-Linear Imaging and Spectroscopy to Engineered Particles

10:00 – 10:30 Tea/Coffee Break

10:30 – 11:15 Boris Rybtchinski, Weizmann Institute of Science, Israel

 Imaging Organic and Protein Crystallization Mechanisms

11:15 – 12:00 TBD

12:00 – 13:30 Lunch

13:30 – 15:00 **Session 6: Vendors Session**

 TBA

15:00 – 15:30 Tea/Coffee Break

 **Session 7: Special Topics**

15:00 – 18:30 Guest Speakers (TBA)

18:30 – 19:00 Reception

19:00 – 21:30 Conference dinner, awards and prizes, and social hour

**Thursday, May 7, 2019**

07:00 – 08:30 Breakfast

 **Session 8: Material Science - Materials Chemistry in Drug Delivery Systems**

 Alfred Lee

08:30 – 09:15 Christian Serre, Institut des Matériaux Poreux de Paris, France

 Porous Biocompatible Metal Organic Frameworks in Biomedicine

09:15 – 10:00 TBD

10:00 – 10:30 Tea/Coffee Break

10:30 – 11:15 David Lechuga-Ballesteros, AstraZeneca Pharmaceuticals LP, USA

The Relevance of Pharmaceutical Material Sciences in the Development of Inhaled Biologics

11:15 – 12:00 TBD

12:00 – 13:30 Lunch and Departures