BioProcessing Asia
Singapore, 26–29 October 2020

Fourth International Conference

Call for Abstracts

Welcome to the Fourth International Conference – BioProcessing Asia 2020 to be held 26–29 October 2020 at the Sofitel Sentosa, Singapore

The BioProcessing Asia Conference Series was created in 2014 to provide a platform to advance the contribution of bioprocessing sciences to the provision of effective biopharmaceutical products and medical interventions in the Asian region. The Conferences address upstream and downstream bioprocessing topics covering product and process development from initial stages to manufacturing and approval. BioProcessing Asia is forward looking but with a pragmatic approach to best practices in bioprocessing, combining strong science and technology with Asian healthcare priorities.

The Asian biopharmaceutical industry continues to flourish, yet several challenges such as hindrance to new technologies, competition, access to talent, uncertainty in regulatory environment and cumbersome bureaucracy may affect the sector's future growth. The BioProcessing Asia 2020 Conference aims to address these key challenges. Sessions therefore focus on the future of biopharmaceuticals, the use of smart process development, the real world of integrated and continuous processing and regulatory development. A specific session addresses cell and gene therapy and Biopharma 4.0 looks to the future.

BioProcessing Asia opens on Monday 26 October 2020 with a Keynote Address from a well-known opinion leader in the Asian biopharmaceutical space. The Programme for BioProcessing Asia includes six Scientific Sessions of 5 talks each on Tuesday–Thursday, 27–29 October. Poster Sessions will enable attendees to discuss the latest issues with presenters.

The Conference and Session Chairs invite you to BioProcessing Asia 2020. We look forward to meeting you in Singapore.

John Curling
(Chair)
JCC AB

Günter Jagschies
(Chair, Scientific Advisory Committee)
Gemini BioProcessing

Mats Gruvegård
(Co-Chair)
GE Healthcare Life sciences

SESSION CHAIRS

Dorothee Ambrosius
Formerly Boehringer Ingelheim, Germany

Arindam Bose
AbiologicsB, USA

Wei (Heidi) Gong
Shanghai Henlius Biopharmaceutical, China

Uwe Gottschalk
Lonza, Switzerland

Stefan Hepbildikler
Roche Pharmaceuticals, Germany

Linda Hwee-Lin Lua
University of Queensland, Australia

Mats Lundgren
GE Healthcare Life Sciences, Sweden

Ekta Mahajan
Genentech, USA

Say Kong Ng
Bioprocessing Technology Institute, A*STAR, Singapore

Hari Pujar
Spark Therapeutics, USA

Anurag Rathore
Indian Institute of Technology, India

Balaji Somasundaram
University of Queensland, Australia

Scott Wheelwright
Complya Asia, China

Min Zhu
Boehringer Ingelheim, USA

BPA
BioProcessing Asia

To submit an abstract go to
www.bioprocessingasia.net

SESSION PROGRAMME

Read the full session descriptions and submit your abstract at ***www.bioprocessingasia.net***

Tuesday 27 October 2020

Session 1. Diseases, treatments and the future of biopharmaceuticals

Arindam Bose, AbiologicsB, USA
*Say Kong Ng, Bioprocessing Technology Institute, A*STAR, Singapore*

Increasing affluence, globalization and digitalization are shaping the focus and demands for biopharmaceuticals. With the novel coronavirus (Covid-19) taking spotlight early in 2020, challenges in the speed of developing treatments for infectious diseases are highlighted. Many infectious diseases are still far from being eradicated, and thus vaccines and novel therapeutics will be needed to manage and treat these diseases. Global demands for treatments of non-communicable diseases such as cardiovascular diseases, cancers, chronic respiratory diseases and diabetes continue to increase.

What strategies can speed up the development of biopharmaceuticals? How can technological advancements reduce cost, especially for emerging therapeutic modalities?

Session 2. The use of smart process development to improve process efficiency and product quality

Stefan Hepbildikler, Roche Pharmaceuticals, Germany
Min Zhu, Boehringer Ingelheim, USA

High-throughput (HT) experimentation allows screening of a wide range of process conditions and improves process understanding and robustness. HT analytical methods are useful to handle the large number of analytical samples for product quality evaluation, especially if automated and integrated into the experimental workflow. Optimized and well-understood HT approaches can also support later stage process characterization. Mechanistic modeling which takes advantage of data collection in HT systems enables *in silico* process development. HTPD, integrated process development, analytics and mechanistic modeling are key components of a lean approach to process development, often referred to as smart process development.

Case studies highlighting the benefits and how major challenges have been solved are considered most inspirational.

Wednesday 28 October 2020

Session 3. A reality check on flexible, integrated and continuous biomanufacturing

Wei (Heidi) Gong, Shanghai Henlius Biopharmaceutical, China
Ekta Mahajan, Genentech, USA

Continuous biomanufacturing is widely believed to offer substantial benefits over traditional batch processes, including increased flexibility, reduced capital investment, faster speed to market, lower cost, etc. Despite the potential benefits, continuous biomanufacturing can increase the system and operations complexity as it requires integration of new manufacturing equipment/technologies, intensified process control, and scientific understanding of process dynamics to support new validation strategies.

We seek case studies on the switch from batch to continuous manufacturing. Topics should focus on global regulatory and process strategy, challenges and reality for pre- and post-implementation and evaluation of disruptive manufacturing strategies.

Session 4. Regulatory development in Asia

Dorothee Ambrosius, Formerly at Boehringer Ingelheim, Germany
Scott Wheelwright, Complya Asia, China

The success of protein-based biologics for the treatment of severe human diseases triggered new waves of innovation in the biological field. Complex mAb-derived formats as well as new modalities such as gene and cell therapeutic products now constitute a significant part of the research and development portfolio. There are also significant changes in regulatory expectations in Asia which have a significant impact on the production and approval strategy.

This session will explore these changes in the regulatory environment globally and in Asia that impact bioprocessing. Case studies that detail the challenges are welcome. We also ask is clinical testing in Australia and New Zealand a way to speed development?

Thursday 29 October 2020

Session 5. Cell and gene therapy: mapping innovation required for manufacturing

Hari Pujar, Spark Therapeutics, USA
Mats Lundgren, GE Healthcare Life Sciences, Sweden

The last decade has seen the emergence of new modalities including ASOs, siRNA, mRNA, cell and gene therapy. These modalities have challenged traditional notions of drug development and manufacturing and have elevated the importance of efficient and scalable manufacturing in the value chain. Autologous production, lack of manufacturing platforms, supply chain, and COGS are particularly unique to these new modalities. Asia is fast becoming a fertile ground for cell and gene therapy, with more products licensed and ongoing trials in China than elsewhere.

This session calls for papers that shed light on the field of product development and manufacturing of cell and gene therapy products. Presentations should address learning from the recombinant world and vaccines and boosting productivity in gene therapy processes.

Session 6. Demystifying Biopharma 4.0

Anurag Rathore, Indian Institute of Technology, India
Uwe Gottschalk, Lonza, Switzerland

There is an increasing use of advanced instrumentation through sampling techniques, new sensors, and analysers in biotech processing, driven by the adoption of PAT and even more lately that of continuous processing. A deluge of information flows out of the various process unit operations and the analysers in a typical bioprocess today. The challenge is to efficiently analyse this data to generate process and product knowledge that can then be used for process monitoring, process control, process improvement, and troubleshooting. Emergence of Industry 4.0 has resulted in applications such as digital twins and *in silico* representations of entire manufacturing processes.

Case studies should address efficient management of large data sets, ensuring data integrity and pre-processing of data. Applications of Artificial Intelligence and Machine Learning in Data Analytics should be addressed.

Session 7. Poster Session

Linda Hwee-Lin Lua, University of Queensland, Australia
Balaji Somasundaram, University of Queensland, Australia

Contributions in the form of data rich posters, aligning to the above-mentioned themes of BPA 2020 are encouraged. Each poster presenter will be given an opportunity to actively engage in scientific discussions during the session.

Based on the novelty of the research, quality of the presentation and clarity of the presenter two awards will be presented at BPA 2020, one for the Best Academic Research Poster and one for the Best Industry Research Poster.

IMPORTANT DATES, 2020

22 June	Closing date for Abstracts
24 August	Discounted registration ends
26 October	Welcome Reception and Keynote Address

Sponsors

www.bioprocessingasia.net

BioProcessing Asia is a biopharmaceutical science and technology focused Conference Series registered in Sweden as a non-profit Association. Organization no: 802503-6792.