CMC Strategy Forum Europe 2024

Schedule

Monday, 21 October, 2024

06:30-08:30 Brasserie Water

Rise and Dine: Breakfast

Breakfast and Wi-Fi is included for guests that booked in the CASSS room block.

07:30-08:30 Mainport Registration Desk

Registration

Registration will be open until 17:00.

08:30-08:45 Mainport Ballroom

Welcome and Introduction to the EFPIA Biomanufacturing Working Group Satellite Session

Karoline Bechtold-Peters, Helen Newton, Fionnuala O'Driscoll

Session Chairs: Karoline Bechtold-Peters, *Novartis Pharma AG*, Helen Louise Newton, *Merck Sharp & Dohme U.K. Limited*, Fionnuala O'Driscoll, *Eli Lilly Kinsale Limited*

Introduced by: Markus Goese, *F. Hoffmann-La Roche Ltd.*

The EFPIA Biomanufacturing Working Group is a cross-company industry team working to aid the development of biological products for patients. Through areas of special interests, the group supports and develops cutting edge science and technology strategies. In the first half the session the working group will showcase some of the current concept papers under development.

The second session will cover the topic of "Alternative & Rapid Microbiological Methods".
Monitoring the microbial condition of the manufacturing environment during aseptic processes is key to ensuring the sterility of the product. This has been done for many decades by means of laid out settling plates, which are then incubated. However, as only a fraction of the germs are capable of culture, this technology will not provide a complete picture of the microbial quality of the environment. Alternative microbial methods that use the biofluorescence of microbes, for example, can measure microbes in the environment with high sensitivity and enable real-time monitoring. The qualification of the method as a sole environmental control requires a great deal of effort, as it is not described in pharmacopoeias. In our session, we will explain the basic principle of environmental monitoring using biofluorescence and provide case studies for implementation in aseptic production. Ways to make the method acceptable and the assessment of how and whether alternative microbial methods for environmental monitoring can increase aseptic safety will be examined from a regulatory perspective. A Q&A and lively panel discussion is intended.

08:45-10:00 Mainport Ballroom

EFPIA Biomanufacturing Group Satellite Session I: Concept Paper Updates

Karoline Bechtold-Peters, Helen Newton, Fionnuala O'Driscoll

Session Chairs: Karoline Bechtold-Peters, *Novartis Pharma AG*, Helen Louise Newton, *Merck Sharp & Dohme U.K. Limited*, Fionnuala O'Driscoll, *Eli Lilly Kinsale Limited*

Session Speakers:

Use of Multi-Attribute-Method by Mass Spectrometry as a QC Release and Stability Tool for Biopharmaceuticals – the EFPIA Perspective
Annick Gervais, *UCB Pharma S.A.*

Navigating Challenges in Subcutaneous Biologics: Advancing High and Ultra-High Concentration Technologies with a Patient-Centric Approach
Karoline Bechtold-Peters, *Novartis Pharma AG*

Use of Multi-Attribute-Method by Mass Spectrometry as a QC Release and Stability Tool for Biopharmaceuticals – the EFPIA Perspective
Andrea Kurz, *F. Hoffmann-La Roche Ltd.*

Additional Panelists:

Thomas Pohl, *Novartis Pharma AG*

10:00-10:30 Mainport Ballroom

Networking Break

10:30-12:30 Mainport Ballroom

EFPIA Biomanufacturing Group Satellite Session II: Alternative & Rapid Microbiological Methods

Karoline Bechtold-Peters, Helen Newton, Fionnuala O'Driscoll

Session Chairs: Karoline Bechtold-Peters, *Novartis Pharma AG*, Helen Louise Newton, *Merck Sharp & Dohme U.K. Limited*, Fionnuala O'Driscoll, *Eli Lilly Kinsale Limited*

Session Speakers:

EU GMPs Annex 1: 2022 - New Role of the Microbiologists on Aseptic Processes
Gilberto Dalmaso, *GDM Pharma Consulting (Virtual Presentation)*

Alternative Microbiological Methods Implementation Case Study – BFPC
Thais Vilgren, *Novo Nordisk A/S*

Accelerating Sterility Testing: A Case Study on Implementing the 7-day Celsis Method
Jonas van den Berg, *Roche Diagnostics GmbH*

12:30-12:35 Mainport Ballroom

EFPIA Closing Remarks

Karoline Bechtold-Peters, Helen Newton, Fionnuala O'Driscoll

Session Chairs: Karoline Bechtold-Peters, *Novartis Pharma AG*, Helen Louise Newton, *Merck Sharp & Dohme U.K. Limited*, Fionnuala O'Driscoll, *Eli Lilly Kinsale Limited*

12:35-13:45 Restaurant Down Under

Networking Lunch

13:45-14:00 Mainport Ballroom

CASSS Welcome and Introduction to the 18th European CMC Strategy Forum

Welcome to the 18th European CMC Strategy Forum

14:00-15:45 Mainport Ballroom

Session I: ICH Regulatory Landscape Development

Mihaela Buda, Heli Suila, Martijn van der Plas

Session Chairs: Mihaela Buda*, EDQM, Council of Europe,* Heli Suila, *Finnish Medicines Agency,* and Martijn van der Plas, *MEB-Medicines Evaluation Board*

Recent ICH developments have shaped the global regulatory environment leveraging science- and risk-based concepts to support lifecycle management (LCM) activities. ICH Q12 provides regulatory tools, such as the product lifecycle management (PLCM) document, which offers opportunities to streamline the regulatory lifecycle of a product. Using elements from ICH Q12, the newly established ICH Q14 guideline describes principles to support change management of analytical procedures based on risk management, enhanced understanding and adherence to predefined performance criteria.
This session will first provide an update on recent developments in the ICH landscape. Then, focus will be given on examples to illustrate the current status, progress made and challenges with regard to the impact of recent ICH guidelines on LCM. Industry case studies will explore the application of ICH Q14 guideline and intended regulatory flexibility. These examples will cover changes to analytical procedure – particularly with the introduction of a new technology -- the use of prior knowledge and construction of adequate analytical packages. The session will then feature industry experiences in developing and registering PLCMs for biopharmaceutical products. In addition, it will showcase current practices around reliance and LCM, addressing the growing global momentum.

Session Speakers:

Navigating the Evolving ICH Regulatory Landscape: A Regulator's Perspective
Sean Barry, *Health Products Regulatory Authority (HPRA), Ireland*

Application of ICH Q2/Q14 to Procedure Development and Changes for Monoclonal Antibodies and Gene Therapy Products
Cyrille Chéry, *UCB Pharma S.A.*

ICH Q12: Experience from PLCM Submissions
Kowid Ho, *F. Hoffmann-La Roche Ltd.*

Regulatory Reliance in LCM: A Reality, Not Just a Dream?
Mark Pellett, *AstraZeneca*

15:45-16:15 Mainport Ballroom

Networking Break

16:15-17:30 Mainport Ballroom

Session I: Panel Discussion - Q&A

Mihaela Buda, Heli Suila, Martijn van der Plas

Session Chairs: Mihaela Buda*, EDQM, Council of Europe,* Heli Suila, *Finnish Medicines Agency,* and Martijn van der Plas, *MEB-Medicines Evaluation Board*

Additional panelists:
Brian Dooley, *European Medicines Agency (EMA)*
Christof Finkler, *F. Hoffmann-La Roche Ltd.*

18:45-23:00 The Euromast

Welcome Reception and Networking Dinner at the Euromast

Join us for a networking event located at the Euromast. You will be blown away by the breathtaking views of Rotterdam, delicious food, and the opportunity to socialize and unwind with your peers.

Tuesday, 22 October, 2024

06:30-09:00 Brasserie Water

Rise and Dine: Breakfast

Breakfast will be available until 10:00am and is included for hotel guests that booked in the CASSS block.

08:00-09:00 Mainport Registration Desk

Registration

Registration will be open until 17:00

09:00-10:45 Mainport Ballroom

Session II: Platforms and Prior Knowledge

Vanja Cankovic, Teresa Pepper, Lionel Randon, Mats Welin

Session Chairs: Vanja Cankovic, *Chiesi Pharmaceuticals GmbH,* Teresa Pepper, *BioMarin Limited*, and Mats Welin, *Swedish Medical Products Agency*

In the dynamic landscape of pharmaceutical development, the synergistic relationship between platform technology and prior knowledge could play a crucial role in accelerating development and authorization of medicines.
Such "agnostic" platforms may play various roles in product development, from process manufacturing, through deriving product quality attributes and driving common analytical methods for the same class or a wide range of products, but also in applying new technologies.
While it is recognized that such tools may have wide applicability in many areas of CMC, there are perceived regulatory questions to their adoption. The intent of this session is to share industry experiences on how such platform approaches can be applied, to get regulators' views and to discuss potential regulatory mechanism and suggestion to the successful implementation of such platform approaches in CMC submissions.

Session Speakers:

An EFPIA Perspective on Enabling the Use of Prior Knowledge and Platform Technologies in Manufacturing
Matt Popkin, *EFPIA/GlaxoSmithKline UK Ltd*

Use of Third Party Prior Knowledge and Platform Data
Gair Ford, *AstraZeneca*

Multiproduct Resin Reuse (MRR) Strategy in Clinical Development
Claudia Frey, *Merck Sharp & Dohme AG*

Use of Prior Knowledge and Platform Approaches: An EU Regulatory Perspective
Ragini Shivji, *European Medicines Association (EMA)*

10:45-11:15 Mainport Ballroom

Networking Break

10:45-11:15 Restaurant Down Under

New Member Networking Break

11:15-12:30 Mainport Ballroom

Session II: Panel Discussion - Q&A

Vanja Cankovic, Teresa Pepper, Lionel Randon, Mats Welin

Session Chairs: Vanja Cankovic, *Chiesi Pharmaceuticals GmbH,* Teresa Pepper, *BioMarin Limited*, Mats Welin, *Swedish Medical Products Agency,* and Lionel Randon*, Ares Trading S.A., An affiliate of Merck Serono S.A.*

Additional Panelists:

Koen Brusselmans, *Sciensano*
Kowid Ho, *F. Hoffmann-La Roche Ltd.*

12:30-13:45 Restaurant Down Under

Networking Lunch

13:45-15:40 Mainport Ballroom

Session III: Artificial Intelligence and Machine Learning: The Benefits and Challenges for CMC in the Biotech Industry

Marta Germano, Kristina Martinell, Tara Sanderson

Session Chairs: Marta Germano*, European Medicines Agency (EMA),* Kristina Martinell*, Phase2Phase Biopharma Consulting AB,* and Tara Sanderson, *UCB Celltech*

In recent years the Biotech Industry has seen a significant increase in the use of data sciences for development, manufacture, and control of new drugs. The use of artificial intelligence (AI) and machine learning (ML) brings many benefits to CMC drug development; providing opportunities to rapidly optimise process design, process control, scale-up, advanced monitoring and management of structured data & pharmaceutical quality systems, ultimately allowing faster patient access to critical drugs. With this increasing trend in the use of AI and ML by industry, Health Authorities are now seeing and increasing trend of submissions using AI, however there is still limited regulatory guidance. To counter this, new reflection and discussion papers are emerging from the EMA and FDA to support and explore a potential framework to regulate AI technologies. In this session we will deep dive into the view of the regulators on the acceptability of the use of AI and ML for CMC and life-cycle management. In addition, the session will include presentations from industry experts currently using AI and ML for drug development, with case studies highlighting the benefits and the challenges faced by industry in implementation of AI and ML, and the industry's vision for the future of AI & ML for pharmaceutical development.

Session Speakers:

The EMA Quality Innovation Group Walks the Tight Rope. Implementation of Digital Novel Technologies to Manufacturing Requires a Regulatory Balancing Act
Giampiero Lorenti, European Medicines Agency *(EMA) - (Virtual Presentation)*

Regulating AI in Drug Manufacturing
Adam Fisher, *CDER, FDA (Virtual Presentation)*

Leveraging AI and Machine Learning in Pharmaceutical Manufacturing: Opportunities, Risks, and Regulatory Considerations
Gert Thurau, *F. Hoffmann-La Roche Ltd.*

The Use of AI and ML in Pharmaceuticals Manufacturing: Implementing Real Examples
Matt Popkin, *GlaxoSmithKline UK Ltd*

15:40-16:00 Mainport Ballroom

Networking Break

16:00-17:15 Mainport Ballroom

Session III: Panel Discussion - Q&A

Marta Germano, Kristina Martinell, Tara Sanderson

Session Chairs: Marta Germano*, European Medicines Agency (EMA),* Kristina Martinell*, Phase2Phase Biopharma Consulting AB,* and Tara Sanderson, *UCB Celltech*

Additional Panelists:

Karoline Bechtold-Peters, *Novartis Pharma AG*

Helen Thomas, *Swissmedic*

Wednesday, 23 October, 2024

06:30-09:00 Brasserie Water

Rise and Dine: Breakfast

Breakfast will be available until 10:00am and is included for hotel guests that booked in the CASSS block.

08:00-09:00 Mainport Registration Desk

Registration

Registration will be open until 17:00

09:00-10:45 Mainport Ballroom

Session IV: PACMP's What's Next?

Sandra Auguste-Bowler, Ulla Grauschopf, Kowid Ho, Helen Newton

Session Chairs: Sandra Auguste-Bowler, *Novo Nordisk A/S, Ulla Grauschopf, Swissmedic,* Kowid Ho, *F. Hoffmann-La Roche Ltd.,* and Helen Newton, *Merck Sharp & Dohme Limited*

Postapproval Change Management Protocols (PACMPs) have been implemented for more than 15 years in the EU and the concept of PACMPs has proven to be successful, extending out into other regions. This topic will explore best practices, pitfalls and other experiences gained to-date with examples of PACMPs for typical changes as well as for more complex changes. This session will also explore the challenges encountered for global submissions, where different agencies may have differing PACMP pathways or approaches, and whether the desired reduction in administrative burden and regulatory relief were obtained. The use of PACMPs in the ICMRA work sharing process as well as experience of PACMPs through the reliance pathway will be touched upon.

Session Speakers:

An Assessor's Perspective on PACMPs
Leonard Both*, Medicines & Healthcare products Regulatory Agency (MHRA)*

One Voice of Quality (1VQ) for PACs & Practical experience with PACMP
Beatrix Metzner*, Boehringer Ingelheim Pharma GmbH & Co. KG*

PACMPs: Best Practices, and Future Opportunities
Vandana Chauhan, *Gilead Sciences, Inc.*

Industry Perspective on the Use of Post-Approval Change Management Protocol
Shrobona Basu Sen, *Novo Nordisk A/S*

10:45-11:15 Mainport Ballroom

Networking Break

11:15-12:30 Mainport Ballroom

Session IV: Panel Discussion - Q&A

Sandra Auguste-Bowler, Ulla Grauschopf, Kowid Ho, Helen Newton

Session Chairs: Sandra Auguste-Bowler, *Novo Nordisk A/S,* Ulla Grauschopf*, Swissmedic,* Kowid Ho, *F. Hoffmann-La Roche Ltd,* and Helen Newton, *Merck Sharp & Dohme Limited*

Additional Panelist:
Andrea Kurz, *F. Hoffmann-La Roche Ltd.*
Brian Dooley, *European Medicines Agency (EMA)*

12:30-13:45 Restaurant Down Under

Networking: Lunch

13:45-15:30 Mainport Ballroom

Session V: Analytical Similarity & Comparability: The Power of Knowledge and Experience

Katrin Buss, Chana Fuchs, Thomas Stangler

Session Chairs: Katrin Buss, *BfArM, Federal Institute for Drugs and Medical Devices,* Chana Fuchs, *CDER, FDA*, and Thomas Stangler, *Sandoz GmbH*

Comparability is a fundamental concept in the development and lifecycle management of biologics. The principles of comparability assessments ensure quality, safety, and efficacy of biological products following changes in the manufacturing process, product alterations, or the creation of a biosimilar by a different sponsor.

The concept of comparability for manufacturing changes for biologics was established in the late 1980s and early 1990s. ICH Q5E was adopted in 2004 and provides globally aligned guidance for comparability exercises to support manufacturing changes. The scientific principles of comparability also allow for the demonstration of biosimilarity, with the first approval of a Biosimilar in the EU occurring in 2006.
Analytical technologies have significantly evolved since then, delivering sensitive and reliable tools for the in-depth characterization of biological products. The development and approval of an extensive range of products have led to substantial enhancements in the understanding of biologics' processes and products. A very large number of comparability exercises have been conducted by industry and evaluated by regulators across the development and commercial lifecycle, both for biosimilars and manufacturing changes, with or without associated clinical studies.

In this session, we aim to explore from an industry and regulator's perspective the progress and experiences accrued over several decades with comparability data for significant manufacturing changes and biosimilars. How can we apply these learnings for future more tailored design of comparability studies and patient-centric specification setting? Specifically, we aim to stimulate discussion around:

- Extent of the comparability exercise:
- How to tailor the analytical comparability exercise to the type of change, considering the choice of physico-chemical & functional characterization assays
- Making an appropriate batch selection considering the number of batches, choice of the reference product, and point of change (e.g. intermediate vs drug substance vs drug product).
- Discussing the relevance of the molecule class: from peptides to mAb and more complex biologics - where are the analytical limitations, where can we use more customized approaches and leverage prior knowledge for well-established molecule classes
- Identifying which changes e.g. manufacturing changes, label changes may necessitate clinical studies,
- Evaluation of differences: Discussing which differences were successfully justified with or without clinical studies. Which differences don't translate into clinical differences and which ones do?
- Exploring the cases in which clinical studies can resolve open scientific questions on efficacy and safety not addressed by physico-chemical, & functional characterization
- Discussing situations where it could be necessary to go beyond PK studies.

Session Speakers:

Rethinking Biosimilar Approval: A Future Without Phase 3 Trials?
Sean Barry, *Health Products Regulatory Authority (HPRA)*

Building the Right Comparability Package: Case Studies Using Current Methodologies and the Future Vision
Elizabeth Rodriguez, *UCB S.A., Belgium.*

Key Enablers for Tailored Biosimilar Development
Johann Holzmann, *Sandoz GmbH*

Demonstrating Comparability of AAV Gene Therapy Products: Application of Lessons Learned
Niamh Kinsella, *Biogen Idec Limited*

15:30-16:00 Mainport Ballroom

Networking Break

16:00-17:15 Mainport Ballroom

Session V: Panel Discussion - Q&A

Katrin Buss, Chana Fuchs, Thomas Stangler

Session Chairs: Katrin Buss, *BfArM, Federal Institute for Drugs and Medical Devices,* Chana Fuchs, *CDER, FDA*, and Thomas Stangler, *Sandoz GmbH*

Additional Panelists:

Niklas Ekman, *Finnish Medicines Agency (FIMEA)*

Klara Tiitso, *European Medicines Agency (EMA)*

17:15-17:30 Mainport Ballroom

Closing Remarks & Invitation to the CMC Strategy Forum 2025

Thursday, 24 October, 2024

09:30-17:30

NEW Short Course: Characterization of Biopharmaceuticals

NOTE: Registration for this short course is an additional fee not included in your Forum registration fee. Please click here for additional information, and to complete your registration for the course.

Course Instructors:
Pepijn Burgers, *Johnson & Johnson Innovative Medicine*
Eef Dirksen, *Byondis B.V.*
Karin Hoogendoorn, *Galapagos NV*

This short course addresses the different aspects that are relevant for the extended characterization of biopharmaceutical products according to regulatory guidelines and expectations. It is intended for both junior and experienced analytical and regulatory staff that work in the field of CMC development of biopharmaceuticals, from either an industry, academic, or regulatory point of view.

The aim of the course is to provide insight into analytical characterization and show how analytical characterization data can be acquired systematically to eventually find their way into the various sections of Module 3 of regulatory submission filings. The course will cover the entire process from defining a characterization strategy to writing of the characterization sections of regulatory files, taking into account the expectations at different phases of clinical development. Current regulatory guidelines will be discussed, as well as the advanced analytical technologies available for characterization, how characterization can support determination of critical quality attributes, and the different purposes of product characterization, like comparability and reference material characterization.

A solid theoretical background on the analytical methods that are typically used to thoroughly characterize complex biotherapeutic molecules will be provided. In addition, an overview will be presented on the structure of Module 3 and what sections typically contain analytical characterization data to demonstrate sufficient knowledge on, e.g. the molecular structure, the most common degradation pathways of the biotherapeutic and how these impact the functionality of the product.

The course will also feature case studies that focus on specific applications of characterization strategies to gain insight into the molecular heterogeneity of biotherapeutic products, coming from our own experience, for example as part of comparability testing.