

## **OPERATIONALIZING INNOVATION:**

## Singapore Chapter EMBRACING ONLINE MONITORING

## AND DIGITALIZATION IN PHARMA

**MANUFACTURING** 

Tuesday, 05 November 2024 9:00 AM to 5.00 PM (+8 GMT) at Four Points by Sheraton Singapore, Riverview

- Online Monitoring Technologies in Pharmaceutical Industries -Toh Her Shuang, MSD
- · The future of Pharma QC on **Automation and Digitalization** with 21 CFR Part 11 compliant **Digital companion for Sterility** Testing - Kenny Tay, Merck
- · Integration of Human and **Technologies to Push Digital Boundaries to Connect, Track,** and Action - Molly Ting, JnJ
- Technology-driven Shopfloor Skills Management: A Key to **Successful CCS Implementation** - (1) Subrata Chakraborty, INOVR & (2) Kalvan K Sarkar, Novartis

- Improving Single-Use Bioreactor **Reliability with Digital Modelling** - Ashutosh Sharma, Amgen
- **Digital transformation for Operational Excellence: The Total Study Management** Approach - Yang Ninghan, Merck
- From Data to Decisions: Leveraging Advanced **Technologies for Quality Excellence/QMM in Pharma** Manufacturing - Karishma Khemani, Heuristics Pharma **Perceptions**
- · The First Step: Where to Start in **Shopfloor Digitization - Kyle** Oberholtzer, Tulip







Bettering your Expectations





# OPERATIONALIZING INNOVATION: EMBRACING ONLINE MONITORING AND DIGITALIZATION IN PHARMA MANUFACTURING

Discover the latest trends in online monitoring and digitalization in pharma manufacturing. Gain valuable insights from industry experts on operationalizing innovation and enhancing production efficiency.



Online Monitoring Technologies in Pharmaceutical Industries
Toh Her Shuang, MSD International GmBH (Singapore)

### **Presentation Overview:**

- Cover monitoring technologies that replace offline Quality Control testing.
- · Shares examples on single and multivariate analysis methods
- Discuss PAT's customization for API manufacturing, highlighting both current and future applications.



The future of Pharma QC on Automation and Digitalization with 21 CFR Part 11 compliant Digital companion for Sterility Testing Kenny Tay, Merck

#### **Presentation Overview**

- Discuss the impact of Pharma 4.0 on microbial QC.
- Explore how digitization enhances data integrity in sterility testing.



From Data to Decisions: Leveraging Advanced Technologies for Quality Excellence/QMM in Pharma Manufacturing Karishma Khemani, Heuristics Pharma Perceptions

#### **Presentation Overview:**

- Learn to enhance Quality Management Maturity (QMM) in pharma with Al, machine learning, predictive analytics, DataOps, and data visualization.
- Examples on improving compliance, efficiency, and decision-making.
- Strategies for building a robust digital quality ecosystem and achieving operational excellence





<u>Technology-driven Shopfloor Skills Management : A Key to Successful CCS implementation</u>
Subrata Chakraborty, INOVR

Kalyan K Sarkar, Novartis

#### **Presentation Overview:**

- Demonstrate the design and deployment of a training course supporting Contamination Control Strategy (CCS) implementation.
- Share experiences in deploying this training in a multinational company,
- Provide actual data, images, and videos of the VR training modules.



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Improving Single-Use Bioreactor Reliability with Digital Modelling Ashutosh Sharma, Amgen

**Executive Director Process Development** 

#### **Presentation Overview**

- Example on improving Single-Use Bioreactor's inefficient gas distribution
- Sharing on digital modelling solution, optimizing gas distribution and validating it with a scale run
- Discuss using digital modelling solution for gassing as the new standard



<u>Digital Transformation for Operational Excellence: The Total Study</u> <u>Management Approach</u>

Yang Ninghan, Merck

**Business Planning and Implementation Specialist** 

### **Presentation Overview**

- Discuss the challenge on dispersing information across various systems, leading to missed data and affecting client service.
- Share on Total Study Management (TSM) implementation within Laboratory Information Management System (LIMS) to consolidate information and provide real-time data tracking.



Integration of Humans and Technologies to Push Digital Boundaries to Connect, Track, and Action

Molly Ting, JnJ

**Executive Director** 

#### **Presentation Overview:**

- Industry 5.0 integrates advanced technologies with human expertise for personalized and adaptable systems.
- A robust Common Data Layer (CDL) provides interoperability, detailed analytics, and to automated systems.

The First Step: Where to Start in Shopfloor Digitization
Kyle Oberholtzer, Tulip
Digital Transformation Consultant

#### **Presentation Overview:**

- Importance of involving operators from the start of digitization projects
- Benefits of a worker-focused Proof of Concept (PoC) or Proof of Value (PoV)
- Maximize value and improve outcomes through operator engagement