



WELCOME TO Advanced vaccine BIOPROCESSING WORKSHOP

February 7-8, Singapore

dcvnm
Developing Countries Vaccine
Manufacturers Network

MERCK

Advanced Vaccine Bioprocessing Workshop

Welcome Letter from Merck



Dear participants,

This is Miles (Qiuming) Shi, Associate Director of Asia Vaccine and Viral Therapies Segment Team, very nice to meet you.

On behalf of all speakers, I would like to use this letter as a welcome to this advance vaccine bioprocessing workshop, which will be held from February 7-8 in Singapore.

In the coming workshop, we will bring you a series of lectures and hands-on session to discuss your challenges in important vaccines, communicate latest technology in bioprocessing, and address your concerns on quality. Hope these topics can help you to solve your toughest problems in your daily work, which is always our mission from Merck.

For a better preparation, we also provided several pre-readings alongside of this letter, please take a look and bring your questions to the workshop.

At last, we would like to thank DCVMN, our long time partner to bring us all together.

Look forward to meeting you in Singapore.

Best Regards
Miles/Qiuming

Agenda

Workshop Agenda

February 7th | Day 1 | Ibis Hotel Bencoolen

Time	Topic	Speaker
9:00-10:30	Cell-base Vaccine- A Case Study on Influenza	Miles Shi
	Challenges and Solution for Pertussis Vaccines	
10:30-11:00	Coffee Break	
11:00-12:30	Challenges and Solutions for Polysaccharide Conjugated Vaccine – A Case Study on PCV	Miles Shi
	Challenges and Solutions for Virus-Like Particle (VLP)	
12:30-13:30	Lunch	
13:30-15:30	Biosafety testing for human vaccines	Edmund Ang
	Cell line and virus seed characterization for human vaccines	
15:30-16:00	Coffee break	
16:00-17:30	Virus safety in vaccine production	Priyabrata Pattnaik
	Best Practice of Nucleic Acid Impurity Reduction in Viral Vaccine Manufacturing	
18:30-20:30	Group Dinner	

Workshop Agenda

February 8th | Day 2 | Merck M-Lab Singapore

Time	Topic	Speaker
8:30-9:30	Downstream Process Development and Optimization	Subhasis Banerjee
9:30-10:30	Implement of Single-use Technology in Vaccine Production	Minh Tran
10:30-11:00	Coffee break	
11:00-11:45	Chromatography in vaccine downstream purification	Sebastin Arokia
11:45-12:00	Regulatory aspects of vaccine processes in early stage trials and scaling up	Michael Payne
12:30-13:30	Lunch	
13:30-15:00	Hands-on practice in M-lab (DSP part)	All hands
15:00-15:30	Coffee break	
15:30-17:00	Hands-on practice in M-lab (Single-use part)	All hands
17:00-17:30	Wrap-up and survey	



pre-reading List

Advanced Vaccine Bioprocessing Workshop

Pre-Reading List

- 1.** Application Note - Generic process of cell culture based influenza vaccine
- 2.** Article - DNA Removal From Vaccine Process
- 3.** Article - Clarification of vaccines
- 4.** Application Note - A Hands-On Guide to Ultrafiltration-Diafiltration Optimization
- 5.** Application Note - Filter Sizing Methods
- 6.** Article - Best Practices for Optimization and Scale-Up of Microfiltration TFF Processes



speaker information

Speaker Information

Dr. Miles Shi



Dr. Miles Shi, associate director of Asia vaccine and viral therapies segment development, is focused on partnering with Asian developers of vaccine and viral therapies (cell and gene therapies) to solve manufacturing challenges and reduce time to clinic.

Miles has over 7 years of experience in process development of biopharmaceutical manufacturing technologies. He led a team in Boehringer Ingelheim from 2012-2016, and responsible for several new vaccine process development and tech transfer. He also worked in GE Healthcare as lead application scientist and Sartorius Stedium as integrated solution manager.

Miles holds a doctoral degree on molecular genetics from Chinese Academy of Sciences (CAS), and a bachelor degree on biological science from Peking University (PKU).

Speaker Information

Dr. Edmund Ang

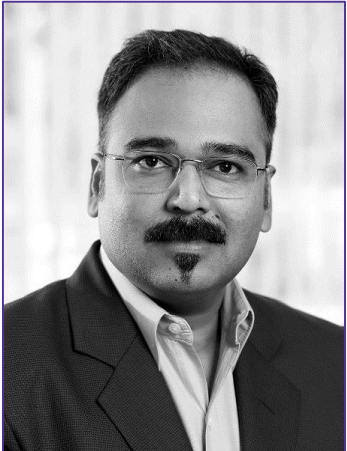


Dr Edmund Ang is the Principal Scientist for BioReliance services providing scientific and technical support and thought leadership on biologics safety testing to biopharma in the Asia Pacific region.

He has extensive life science research and development experiences from both academic and industrial settings. He obtained his PhD in Cell Biology from the University of Edinburgh, Scotland, UK, followed by postdoctoral research on cell signalling at Stanford University, California, USA, and at the National Cancer Centre Singapore, before joining Ionis Pharmaceuticals and Eli Lilly working on cancer drug and biomarker discovery programs. He also has commercial experience with biotech including Roche Diagnostics and Thermo Fisher Scientific in the areas of cellular analysis, applied markets and bioproduction.

Speaker Information

Dr. Priyabrata Pattnaik



Dr. Priyabrata Pattnaik is Head of Biologics of Operations of Merck spearheading design, start up and qualification of BioReliance biologics safety testing facility in Singapore. Previously he was Director of Global Vaccine Initiative of Merck supporting vaccine business, development of integrated solutions for vaccine development and manufacturing, and head of M Lab at Singapore and lead a group of process engineers providing consulting services and applications support.

Dr. Pattnaik worked as a Scientist at International Centre for Genetic Engineering and Biotechnology (United Nations), New Delhi for Malaria Vaccine Initiative [MVI] developing malaria vaccines. Later moved to Defence R&D Organization, Ministry of Defence, Govt. of India to lead the biodefence vaccine program. He was principal investigator for several vaccine projects and awarded by Indian govt with Brig. KM Rao award for his contribution on dengue vaccine development. He is the co-author of ~90 publications in international journals and eight book chapters.

Priyabrata Pattnaik received master degree in Microbiology from Orissa University of Agriculture and Technology, and awarded PhD in Microbiology from National Dairy Research Institute, India.

Speaker Information

Dr. Subhasis Banerjee



Dr. Subhasis Banerjee leads the India, Singapore, SE Asia & Oceania Manufacturing Sciences & Technology Group of Merck working for last eleven years.

Subhasis is a Ph.D. in Biochemistry from India in the area of protein purification. Prior to Merck he was a postdoctoral researcher at The Ohio State University, Columbus, USA. Subhasis has nine publications in international peer reviewed journals and presentations in several national and International Conferences.

Speaker Information

Sebastin Arokia



Mr. Sebastin Arokia Dass, Sr- Sales development specialist- Chromatography for India and Singapore, is focused on technically support biosimilar/vaccine/plasma customers for chromatography process optimization and operations.

Sebastin has over 9 years of experience in process development and operation of biopharmaceutical manufacturing technologies. He also worked in Syngene international limited a Biocon company as Jr. Manager and Gennova biopharmaceuticals as Sr. Executive, Sebastin holds a Master of technology degree on Biotechnology from PRIST university, India and a bachelor of technology degree on Pharmaceutical engineering from Bharathidasan university, India.

Speaker Information

Michael Payne



Mr. Michael Payne is Principal Technical Consultant at Merck Millipore. He previously worked as BPS Validation Support Manager, Asia, and managed Millipore's global technical training department for 10 years. He is responsible for filtration and separations regulatory and troubleshooting support in Asia. He holds a bachelor's degree in Chemical Engineering (Bioprocessing) from the UNSW, Sydney.

thanks

