

Title: Hands-on-training program on Cell Line development and Upstream Bioprocessing		
Venue: Institute of Chemical Technology, Mumbai		
Dates: 3rd Feb – 7th Feb, 2020		
<p>Key Note Speaker Dr. Sanjeev Gupta, R&D Head, IPCA Dr. Prasad T Krishnamurthy, Vice President, Aurobindo Biologics Dr. Amita Goel, CEO, Celltheon Corporation, USA</p>		
<p>Speaker (Senior Expert) Dr. Vaibhav Jadhav, Senior Scientist, Ribbon Biolabs, Austria* Dr. Abhishek Mule, Application Specialist, Eppendorf Mr. Kaumil Bhavsar, Kashiv Biosciences* Dr. Mugdha Gadgil, CSIR-NCL* Mr. Vineet Bhatnagar, Manager SLS, Pall Corporation Mr. Amar Shrivastava, Manager, Serum Institute of India</p>		
<p>Junior Expert Manjunath Dudhanikar, Assistant Manager, Serum Institute of India Kritika Gupta, ICT, PhD Scholar Prachi Padte, ICT, Research Scholar Ranjeet Desai, ICT, PhD Scholar Ajit Kotkar, ICT</p>		

Day-1: 3rd Feb, 2020		
Sr. No.	Time	Activity
1	09:30 – 11:00Am	Classroom Session: Introduction to Clone Development and Cell line Engineering for Biosimilars
2	11:15Am – 1:00 pm	Classroom Session: Introduction to different types of Recombinant DNA Technology (Cloning, Restriction Enzyme (RE) Digestion, Ligation)
3	2:00 pm – 6 pm	Lab Session: Hand on Training
		1. Insert and Vector Preparation by RE method
		2. Gene of Interest and Vector Ligation
		3. Troubleshooting of Cloning

Day-2: 4 th Feb, 2020		
1	9:30Am – 11:00 Am	Classroom Session: Introduction to Aseptic Method of Cell Culture Handling.
		Introduction to different types of Transfection methods(Transient and Stable)
2	11:30 Am – 1:00 pm	Hands on Session of Cell Culture Handling
3	2:00 – 6:00 pm	Hands on Training of Transfection by Chemical method.
		Lab Session: Introduction to different types of Transfection methods(Transient and Stable)
		Hands on Training of Transfection by Chemical method
Day-3: 5 th Feb, 2020		
1	09:30 Am – 11:30 Am	Classroom session :Introduction to Bioreactors and Upstream Process Development
2	12:00 – 1:00 pm	Introduction to OTR &kLa, Tip speed and Power number
3	2:00pm – 4:00pm	Introduction to Setting of Bioreactor-Control Strategies
		Software Control of Bioreactor
		Various Parameters to be controlled using bioreactor
4	4:30 – 6:00pm	Hands on Training on Media Filtration
Day-4: 6 th Feb, 2020		
1	9:30 – 11:00 Am	Packing and sterilization of Bioreactor, sample port management. Calibration
		Protocols for probes and pumps
2	11:30 – 6pm	Hands on Session- Aseptic Charging of Media
		DO Probe calibration PBT Lab
		Inoculum Addition
Day 5 th -7 th Feb, 2020		
1	9:30 – 11:00Am	Classroom session: Advances in CHO cell growth using bioreactor and scaling up

2	11:30 – 1:00	Glucose estimation by GOD-PAP Kit
3	2:00 - 4:30	Determination of Viable cell density, viability at different time points using cell counter by
		Automated Cell counter(Life Technologies) using Trypan Blue, Data analysis and Conclusion