High Throughput Screening & Process Development – how small can we get?

When: Wednesday, April 20th, 2022 to Friday, April 22th, 2022

Where: University of Natural Resources and Life Sciences Vienna, Muthgasse 11, SR 12 & 13, 1190 Vienna, Austria

HIGH THROUGHPUT SCREENING & PROCESS DEVELOPMENT | VIENNA, 2022

Programme:

Wednesday, April 20th, 2022	
From 3:00 pm	Registration
4:00 pm	Welcome
4:15 pm	Keynote I – Lessons learned in building high-throughput process development capabilities, Jennifer Pollard, Merck; USA
5:00 pm	Keynote II – Design of Experiments and AI: Friends or enemies for mechanistic modelling? Shuichi Yamamoto, Yamaguchi University, Japan
6 pm to 8 pm	Welcome Reception

Thursday, April 21th, 2022	
9 am	Welcome
Session I: Engineering Fundamentals for Scaling	
9:05	Can we directly go from microscale to industrial scale – what are the challenges we face? Astrid Dürauer, BOKU Vienna, Austria
9:30	What can we learn from proteins for process development of the new formats? Alois Jungbauer, BOKU Vienna, Austria
9:55	Automated microscale processing: fundamentals and application to biopharmaceuticals production, Martina Micheletti, University College London, UK
10:20 - 10:40	Coffee Break
Session II: Bioprocess Development	
10:45	General considerations on scaling and high throughput aspects in Upstream process development, Gerald Striedner, BOKU Vienna, Austria
11:15	Challenges of establishing a fermentation development platform in an industrial environment, Sandra Abad, Boehringer-Ingelheim RCV, Austria
11:40	Moving towards fully autonomous model-based high-throughput bioprocess development and clone discrimination, Peter Neubauer, TU Berlin, Germany
12:05-1:00	Lunch Break
Session III: Downstream Processing	
1:00	The real world of preparative protein chromatography: multi-component adsorption, Rainer Hahn, BOKU Vienna, Austria
1:25	Integrated process modelling and machine learning applied to high throughput process development, Cécile Brocard, Boehringer-Ingelheim RCV, Austria
1:50	Scalability of pre-packed preparative chromatography columns with different diameters and lengths - considering extra column effects, Susanne Schweiger, R&D Croma-Pharma, Austria - geht nicht
2:15 - 2:45	Coffee Break
Session IV: 5`Flash presentations (tba based on the submissions)	
2:45	#1
2:50	#2
2:55	#3
3:00	#4
3:05	#5
3:10	#6
3:15 – 4:45	**Poster Session**
Session V: Keynote and Round Table Discussion	
4:45	20 years of HTPD - lessons learned and future directions, Karol Lacki, Avitide, USA
5:15	Round Table Discussion “Quo vadis HTPD – what do we know, what is still missing” Participants: Cécile Brocard, Karol Lacki, Jennifer Pollard, Shuichi Yamamoto Moderation: Marcel Ottens, Astrid Dürauer
7 pm	**Dinner at Heurigen**

Friday, April 22th, 2022	
Site Visit Boehringer-Ingelheim RCV	
9 to 11:30 am	**Site Visit Boehringer-Ingelheim RCV** (max.25 participants, registrations mandatory), Individual travel to and from BI-RCV, Meeting point: 8:45 am Porter´s Lodge, "Gate Mitte", Belghofergasse 12, 1120 Vienna; Bring your photo identification!
12:00 – 1:00	**Lunch at BOKU**
1:00	**Welcome**
Topic III: Microfluidics	
1:00	Nano Scale HTPD, Marcel Ottens, TU Delft, NL
1:25	How to fasten chromatography process development using a microfluidic lab-on-a-chip platform, Ana Azedvedo, Instituto Superior Técnico, Lisbon, Portugal
1:50	From Small Molecules to Cell & Gene Therapy: A Journey in Bioprocess Microfluidics, Nicolas Szita, University College London, UK
2:15	Flow Biocatalysis: Challenges and Opportunities for Bioprocessing, Marco Marques, UCL, University College London, UK
2:40-3:00	Coffee Break
Session VII: Big data and Modelling	
3:00	Statistical Models in Up- and Downstream Processing – their merits, limitations and realization with **R**, Michael Melcher, BOKU Vienna, Austria
3:25	The beauty of mechanistic models, Bernt Nilsson, Lund University, Sweden
3:50	Advanced machine learning for bioprocess development - How hybrid models can change the perspective, Mark Dürkop, Novasign, Vienna, Austria
4:15	How can computational fluid dynamics help us with scaling challenges? N.N.
4:40	**Closing Remarks & End of Symposium**