

Organizer



In Cooperation with



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

When: Wednesday, April 12th, 2023 to Friday, April 14th, 2023

Where: University of Natural Resources and Life Sciences Vienna, Muthgasse 11, MUG 3, ground floor, SR 12 & 13, 1190 Vienna, Austria

Sponsors



Programme

Wednesday, April 12 th , 2023	
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; US
5:00 pm	Keynote II – What we need for accelerated chromatography process development - Mechanistic models, hybrid models, high-throughput experiments, AI and what else? Shuichi Yamamoto, Yamaguchi University, Japan
6 pm to 8 pm	Discussion and Welcome Reception

Thursday, April 13th, 2023	
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? Johannes Buyel, BOKU Vienna, Austria
9:30	What can we learn from proteins for process development of the new formats? Alois Jungbauer, BOKU Vienna, AT
9:55	Automated microscale processing: fundamentals and scaling approaches for 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, AT
11:15	Challenges of establishing a fermentation development platform in an industrial environment, Daniel Fleischhandl, Boehringer-Ingelheim RCV, AT
11:40	Moving towards fully autonomous model-based high-throughput bioprocess development and clone discrimination, Peter Neubauer, TU Berlin, G
12:05-1:00	Lunch Break and Poster Session
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 - a case study on HT development and Scale-up of an AAV Capture and Polishing Step, Tim Schröder, Repligen, DE
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, Repligen, SE
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	Recap and Reflections of First Day at Heurigen
Friday, April 14th, 2023	
Site Visit Boehringer-Ingelheim RCV (not confirmed yet)	
9 to 11:30 am	Site Visit Boehringer-Ingelheim RCV (max.20 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, Raquel Aires Barros, 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, FH Joanneum, Graz, 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, AT
4:15	How can computational fluid dynamics help us with scaling challenges? Cees Haringa, TU Delft, NE
4:40	Closing Remarks & End of Symposium