Program

Integrated Continuous Biomanufacturing VII

October 5 - 9, 2025
Dubrovnik, Croatia

Conference Co-Chairs

Kevin Brower
Sanofi (USA)

Alois Jungbauer
BOKU (Austria)

Mark Brower
Merck (USA)

Irina Ramos
Johnson & Johnson (USA)

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Engineering Conferences International (ECI) is a not-for-profit global engineering conferences program, originally established in 1962, that provides opportunities for the exploration of problems and issues of concern to engineers and scientists from many disciplines.

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Welcome from Conference Chairs

It is our great pleasure to welcome you to Dubrovnik, Croatia for the Integrated Continuous Biomanufacturing (ICB) VII conference. The ICB series is the world's premiere conference in the area of continuous biomanufacturing, and we are excited to see this community growing since 2011. This growth has enabled the addition of the inaugural pre-conference tutorial session to the conference line-up, while also boosting registration to more than 200 attendees!

This conference is organized by Engineering Conferences International (ECI), a not-for-profit global engineering conferences program, originally established in 1962, that provides opportunities for the exploration of problems and issues of concern to engineers and scientists from many disciplines. ECI has held more than 2,000 conferences covering a multitude of leading-edge topics that are uniquely cross-disciplinary and have served the engineering/scientific community for over 60 years.

We welcome you to the conference and introduce you to the theme for ICB VII - *Continuously Connecting* - inspired by the momentum created over the years in this field and the 1,000+ islands from this region, where connective trails built an integrated and strong nation of sailors, merchants and innovators.

Thanks to the industrial sponsors for their generous support, and all the board members, session chairs and ECI staff, we have a great program for you. With cutting edge and new topics for oral presentations, poster sessions and workshops before and during the conference, we will all benefit from great scientific content that will foster interactions and make this event productive and invaluable. Come prepared to enjoy and participate to the fullest extent.

Let’s all benefit from connecting our islands of knowledge to continue moving forward smart, creative and robust ways to intensify and improve productivity of our bioprocesses. See you soon in Dubrovnik!

Conference Chairs:

Alois, Kevin, Mark, Irina

Previous conference in this series

Integrated Continuous Biomanufacturing
October 20 - 24, 2013
Castelldefels, Spain

Conference Chairs:
Konstantin Konstantinov, Genzyme-Sanofi, USA
Chetan Goudar, Amgen, USA
Nigel Titchener-Hooker, University College London, UK

Integrated Continuous Biomanufacturing II
November 1 - 5, 2015
Berkeley, California, USA

Conference Chairs:
Chetan Goudar, Amgen, USA
Suzanne Farid, University College London, UK
Christopher Hwang, Genzyme-Sanofi, USA
Karol Lacki, Novo Nordisk, Denmark

Integrated Continuous Biomanufacturing III
September 17-21, 2017
Cascais, Portugal

Conference Chairs:
Suzanne Farid, University College London, UK
Chetan Goudar, Amgen, USA
Paula Alves, IBET, Portugal
Veena Warikoo, Axcella Health, Inc., USA

Integrated Continuous Biomanufacturing IV
October 6 – 10, 2019
Brewster (Cape Cod), Massachusetts
Conference Chairs:
Veena Warikoo, Roche, USA
Alois Jungbauer, BOKU, Austria
Jon Coffman, AstraZeneca, USA
Jason Walther, Sanofi, USA

Integrated Continuous Biomanufacturing V
October 9-13, 2022
Sitges, Spain
Conference Chairs:
Ana Azevedo, Técnico Lisboa, Portugal
Jason Walther, Sanofi, USA
Rohini Deshpande, Amgen, USA

Previous conference in this series

Integrated Continuous Biomanufacturing VII
October 20 – 24, 2024
Leesburg, Virginia
Conference Chairs:
Ana Azevedo, Instituto Superior Técnico, Portugal
Aaron Noyes, Apogee Therapeutics
Kevin Brower, Sanofi, USA

ICB Lifetime Achievement Award

The 2025 awardee is **Alois Jungbauer**, recognizing his extraordinary contributions to advancing the science, technology, and global adoption of integrated continuous biomanufacturing.

For more than four decades, Professor Jungbauer has been a trailblazer in the field, known for his visionary leadership, pioneering innovations, and unwavering dedication to education and collaboration. A professor of Downstream Processing and former Head of the Institute of Bioprocess Science and Engineering at BOKU, Vienna, his influence spans both academia and industry. He has held adjunct positions across the globe and shaped the next generation of bioprocess engineers through his mentorship of over 90 doctoral students.

Professor Jungbauer was among the earliest advocates for continuous bioprocessing, transforming batch-based paradigms into streamlined, efficient continuous systems. Notably, his breakthrough in continuous virus inactivation demonstrated inactivation within one minute — a milestone that unlocked new frontiers in integrated downstream processing.

His work on residence time distribution (RTD) modeling laid the foundation for real-time process control and product traceability, tools now aligned with global regulatory guidelines and widely adopted across the industry. These contributions underscore his role not only as an innovator but as a global thought leader committed to enabling real-time release and process automation.

Beyond the lab, Professor Jungbauer has served as a tireless ambassador for ICB across the world. As a founding member of the European Society of Biochemical Engineering Sciences (ESBES) and a consistent leader in the ICB conference series, he has shaped the strategic vision of the community through cross-continental collaboration and knowledge exchange.

In his leadership roles at the Austrian Center of Industrial Biotechnology (ACIB) and the CODOBIO and CAARE doctoral networks, Professor Jungbauer has fostered international cooperation to address critical challenges in vaccine delivery, gene therapy, and sustainable manufacturing.

His scientific excellence is reflected in an impressive body of work: over 400 peer-reviewed publications, 14,000+ citations, and numerous patented technologies that address both performance and environmental sustainability. His contributions to buffer recycling, nanomembrane development, and integrated virus purification stand as a testament to his enduring impact on the field.

Professor Jungbauer's legacy is defined not only by his prolific output but by his commitment to building a better future through biomanufacturing — one that is more efficient, accessible, and sustainable for all.

Please join us in celebrating Professor Alois Jungbauer, a true pioneer, educator, and global leader whose contributions have shaped the past, present, and future of integrated continuous biomanufacturing.

The Sanofi Award is given biannually to recognize lifetime achievement in the field of Integrated Continuous Biomanufacturing (ICB). The award recognizes those that exemplify transformative leadership bringing sustained and disruptive innovation that reaches beyond the ICB community to broader industry and academia. The award is named in acknowledgment of Sanofi's pioneering work in ICB and the legacy of influential scientists and engineers throughout the community. An award of $5000 cash and a commemorative plaque will be presented at the ECI Conference on Integrated Continuous Biomanufacturing (ICB VII) in Dubrovnik, Croatia.

Previous Award Winner: Charles Cooney, 2024

2025 Integrated Continuous Biomanufacturing Award Winner

The ICB Award Committee is pleased to announce that Dr. Weichang Zhou of WuXi Biologics has been awarded the 2025 Integrated Continuous Biomanufacturing (ICB) Award.

Dr. Zhou has made outstanding contributions to the field of continuous bioprocessing over a career spanning more than three decades. His work at Genzyme (later Sanofi) and WuXi Biologics has pioneered the development of integrated continuous bioprocessing. Dr. Zhou's remarkable achievements in his bioprocessing career include nearly ninety publications, sixteen patents, and numerous awards. He has also trained thousands of engineers and scientists worldwide, advancing the progress of continuous bioprocessing. His leadership and dedication to the profession are fully reflected in his innovative work and passionate commitment to the bioprocessing community.

During his time at Genzyme, Dr. Zhou led teams to characterize a series of legacy long-term perfusion processes and improve the productivity of CHO cells producing recombinant enzymes by feeding trace elements to enhance cell growth and metabolism. His teams developed next-generation high productivity perfusion cell culture processes for manufacturing recombinant enzymes and monoclonal antibodies, and implemented integrated continuous processing for the production of protein biologics.

At WuXi Biologics, Dr. Zhou has significantly advanced the field with the WuXiUPTM platform, which integrates intensified continuous cell culture and direct product capture chromatography, offering superior scalability, robustness, and purification yield. This platform accelerates biologics development and manufacturing, reducing costs and enhancing productivity. WuXi Biologics' first end-to-end continuous drug substance manufacturing demonstrated the platform's benefits, achieving productivity of 100-120 g/L in 25 days, a ten-fold improvement over traditional fed-batch methods, with downstream yields of 80-90%. The continuous capture reduced Protein A resin use by 90%, lowering clinical manufacturing costs. WuXiUPTM has been implemented in over 40 projects, with three products approved in China and one (Pombiliti™) approved by EMA, MHRA, and FDA.

His indelible contributions to continuous bioprocessing, revolutionizing the biopharmaceutical industry are summarized below in more details.

1. Development of the WuXiUP™ Platform

Dr. Zhou led the development of the WuXiUP™ platform, a game - changing innovation in continuous bioprocessing at WuXi Biologics. This integrated platform combines continuous cell culture with

continuous direct product capture. By intensifying the process, it enables the continuous manufacturing of nearly all types of biologics. For example, it allows 2,000 - liter disposable bioreactors to achieve productivity on par with traditional 20,000 - liter stainless - steel bioreactors. This not only significantly boosts productivity but also substantially reduces the cost of goods.

2. Process Optimization in Continuous Cell Culture

Dr. Zhou optimized key parameters in continuous cell culture, such as culture temperature, basal media, and perfusion rate. In a case study of monoclonal antibody production via the WuXiUP™ process, by carefully evaluating and adjusting these parameters, the process was enhanced and made more robust. He also recognized the importance of addressing the instability of certain proteins in continuous culture. For instance, when dealing with enzymes that are prone to degradation, he pioneered the use of continuous perfusion culture over extended periods (e.g., up to 60 days in some cases) to ensure stable production. This approach effectively solved the problem of protein instability during the production process.

3. Integration of Downstream Processing in Continuous Bioprocessing

To improve the overall efficiency of continuous bioprocessing, Dr. Zhou focused on integrating downstream processing. He designed a continuous dual - pore size hollow fiber cell separation and product harvest system. This system was specifically developed to complement the increased harvest volume from upstream production in continuous bioprocessing. In practical applications, this innovation led to a significant increase in protein concentration and a reduction in harvest volume. Additionally, in the downstream purification process, continuous capture techniques were implemented. This not only reduced the demand for Protein A in batches but also significantly decreased the cost during clinical production, making the entire continuous bioprocess more cost - effective.

4. Application of Process Analytical Technology (PAT) in Continuous Bioprocessing

Dr. Zhou was also a pioneer in applying PAT in continuous bioprocessing. He integrated Raman spectroscopy and machine learning to create PAT platforms. These platforms enabled real - time monitoring of continuous bioprocesses, allowing for the detection of product aggregation and fragmentation levels during the production process. They also facilitated the automatic control of viable cell density. By providing real - time data, these PAT platforms supported better process development and significantly accelerated the CMC development progress. This real - time monitoring and control ability is crucial for maintaining the quality and consistency of products in continuous bioprocessing, ensuring that the final biologics meet high - quality standards

Additionally, Dr. Zhou has actively contributed to the organization of key industry conferences including the Integrated Continuous Biomanufacturing. He presented his work a few times at this conference and served on the Organizing Committee for both ICB III and ICB VII, helping to shape the agenda and facilitate discussions that have driven the field forward.

We are honored to present Dr. Weichang Zhou with the 2025 ICB Award in recognition of his outstanding achievements and leadership in the field of continuous bioprocessing.

Congratulations, Dr. Zhou!

Previous Award Winners: Chetan Goudar, 2024
Veena Warikoo, 2022
Massimo Morbidelli, 2019
Konstantin Konstantinov, 2017

Conference Sponsors

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Schedule

Integrated Continuous Biomanufacturing VII

October 5 - 9, 2025

Dubrovnik, Croatia

Engineering Conferences International

Locations and Notes

• *Technical sessions will be in the Solderini Ballroom.*

• *Poster Sessions will be in the Giardino Room. Workshop locations will be announced on site.*

• *Breakfasts and lunches will be in the Origano Room.*

• *Dinner locations are noted in the program.*

• *The gala dinner on Wednesday will be in the Origano Terrace.*

• *The ECI on site office is Wind Roses East.*

• *Audio, still photo and video recording by any device (e.g., cameras, cell phones, laptops, PDAs, watches) is strictly prohibited during the technical sessions, unless the author and ECI have granted prior permission.*

• *Speakers – Please have your presentation loaded onto the conference computer prior to the session start (preferably the day before).*

• *Speakers – Please leave at least 3 minutes for questions and discussion.*

• *Please do not smoke at any conference functions.*

• *Turn your mobile telephones to vibrate or off during technical sessions.*

• *After the conference, ECI will send an updated participant list to all participants. Please check your listing now and if it needs updating, you may correct it at any time by logging into your ECI account.*

• *Emergency Contact Information: Because of privacy concerns, ECI does not collect or maintain emergency contact information for conference participants. If you would like to have this information available in case of emergency, please use the reverse side of your name badge.*

Preconference Schedule – Early arrivals and tutorial participants

Saturday, October 4, 2025

16:00 – 17:00	Badge pick-up for early arrivals (Wind Roses East)
17:00 – 19:00	Networking reception for early arrivals (Rooftop Terrace)

Sunday, October 5, 2025

08:00 – 08:30	Preconference Tutorial Check-in (Wind Roses East)
08:30 – 08:40	**Preconference Tutorial Welcome** (Wind Roses West/South) Co-chairs: Alois Jungbauer, BOKU, Austria Konstantin Konstantinov, Ring Therapeutics Giorgio Carta, University of Virginia
08:40 – 10:10	**Tutorial Session 1: Design and Scale-Up of Upstream and End-to-End Integrated Processes**
10:10 – 10:30	Coffee Break
10:30 – 12:00	**Tutorial Session 2: Non-Chromatographic Unit Operations for Continuous Biomanufacturing**
12:00 – 13:00	Lunch (for tutorial attendees)
13:00 – 14:30	**Tutorial Session 3: Design and Operation of Continuous Chromatography**

Preconference Schedule – Early arrivals and tutorial participants

Sunday, October 5, 2025

12:00 – 15:00	Conference check-in (Soderini Foyer)
15:00 – 15:15	Conference welcome – Conference Chairs
15:15 – 17:30	**Session 1: Digital (R)evolution for ICB** ***Sponsored by Sanofi*** Co-chairs: Maria Papathanasiou, Imperial College London; Nuno Pinto, Merck & Co., Inc.
15:15 – 15:20	Introduction
15:20 – 15:45	**Reinforcement learning for automated control of semi-continuous chromatography** Foteini Michalopoulou, Imperial College London, UK
15:45 – 16:10	**Building a digital integrated continuous purification platform – approaches for next gen process development and control** Sushmitha Krishnan, Sanofi, USA
16:10 – 16:35	**CPI's end-to-end continuous Intensified Biomanufacturing Platform: accelerating innovation in bioprocess development and sustainability** Liam Nattrass, Centre for Process Innovation (CPI), UK
16:35 – 17:00	**Simultaneous scheduling and control of Protein A chromatography for integration to dynamic upstream conditions** Ian Gough, McMaster University, Canada
17:00 – 17:25	**Role of AI -ML in next generation biopharmaceutical manufacturing** Anurag Rathore, Indian Institute of Technology Delhi, India
17:25 – 17:55	Break
18:00 – 18:30	**Poster snapshots** Co-chairs: Anand Nagarajan, AstraZeneca; Sara Badr, The University of Tokyo; Maria del Carme Pons Royo, Massachusetts Institute of Technology **Continuous alkaline lysis of plasmid-containing *E. coli* cells using an oscillatory flow reactor** A. Rita Silva-Santos, iBB - Institute for Bioengineeering and Bioscences, Portugal **Challenges experienced in steady state perfusion and development of a new dynamic perfusion platform** Charles Budde, Sanofi, USA **Automated sensor system for on-line monitoring of monoclonal antibody titer** Fernanda Rebellato Giordano Martim, ArgusEye AB, Sweden **An intensified single-step, flowthrough polishing process: A closer look at aggregate and mock virus removal with Capto adhere** Kurt Boenning, Cytiva, USA
18:30 – 19:20	**Keynote Presentation**: **From batches to flow: Transforming downstream processing into a continuous enterprise** Alois Jungbauer, BOKU University, Austria
19:20 – 20:00	Reception (Sunset Pool)
20:00 – 21:30	Dinner (Sunset Pool)
21:30 – 23:00	Social Hour / Drinks for purchase

Monday, October 6, 2025

06:30 – 08:00	Breakfast
08:00 – 10:10	**Session 2: ICB for Emerging Modalities** ***Sponsored by Cytiva*** Co-chairs: Caryn Heldt, Michigan Technological University; Karol Lacki, GE Healthcare Life Sciences
08:00 – 08:05	Introduction
08:05 – 08:30	**Continuous manufacturing of vaccines, for rapid response to the next Disease X** Renske Hesselink, CEPI, Norway
08:30 – 08:55	**Empowering 5.0 biosolutions through continuous realtime PAT and computational controls reducing waste, while saving time and cost** Edita Botonjic-Sehic, ReciBioPharm, USA
08:55 – 09:20	**Enabling continuous biomanufacturing for virus-based expression systems via multi-stage bioreactors** António Roldão, iBET, ITQB-NOVA, Portugal
09:20 – 09:45	**High performance countercurrent membrane purification for continuous processing of RNA therapeutics** Andrew Zydney, Pennsylvania State University, USA
09:45 – 10:10	**Integrated continuous downstream process for non-enveloped virus-like particles** Lukas Gerstweiler, The University of Adelaide, Australia
10:10 – 11:10	Coffee Break (*Sponsored by Amgen*)
11:10 – 12:00	**Keynote Presentation: Industrial Symbiosis: How local cross-sectoral collaborations can help transform industrial production towards a circular economy – surplus from circular production** Per Møller, Kalundborg Symbiosis, Denmark
12:00 – 13:30	Lunch
13:30 – 15:00	**The Boardroom Playbook: Driving Business Value through ICB** Session Chairs: Suzanne Farid, University College London; Michael Coolbaugh, Sanofi
15:00 – 18:00	**Session 3: Keeping Cells Continuous Happy – Strategies for Continuous Cell Culture Processes** ***Sponsored by Asahi Kasei Bioprocess*** Co-chairs: Veronique Chotteau, KTH; AdBIOPRO, Competence Centre for Advanced Bioproduction by Continuous Processing; Kenneth Lee, AstraZeneca
15:00 – 15:05	Introduction
15:05 – 15:30	**Enhancing filtration performance in perfusion cell culture across scales** Patrick Romann, Levitronix, Switzerland
15:30 – 15:55	**In-line secondary clarification of perfusate: Evaluation of tangential flow and depth filtration** Lauriane Gaudette, MilliporeSigma, USA
15:55 – 16:20	**Machine learning-driven cell line selection for high-density perfusion culture** Shuhei Katayama, FUJIFILM Corporation, Japan
16:20 – 17:10	Coffee Break (*Sponsored by MilliporeSigma*)

Monday, October 6, 2025 (continued)

17:10 – 17:35	**Harmonized media platform and clone selection framework combined with a strategy to modulate cell growth for developing highly productive continuous bioprocess** Venkata Tayi, Merck & Co., Inc., USA
17:35 – 18:00	**Recycling perfusion platform for continuous mAb production using SPTFF permeate** Jaeweon Lee, University of Massachusetts Lowell, USA
18:00 – 18:30	**Poster Snapshots** Co-chairs: Anand Nagarajan, AstraZeneca; Sara Badr, The University of Tokyo; Maria del Carme Pons Royo, Massachusetts Institute of Technology **Continuous operation enables cold ethanol precipitation of intravenous immunoglobulin G within one minute** Nico Lingg, BOKU University, Austria **A non-EBA method to load unclarified feed onto a well packed chromatography column** Zuwei Jin, Lisure Technology Co., USA **Improving perfusion performance via application of a perfusion-specific CLD workflow** Vince Balassi, Merck Ltd., an affiliate of Merck KGaA, Germany **Sustainable integrated continuous antibody downstream processing using buffer intensification** Bernt Nilsson, Lund University, Sweden
18:30 – 19:00	Break
19:00 – 20:30	Dinner (Marketplace Promenade)
20:30 – 22:00	**Poster Session 1** (Giardino) (Authors of odd-numbered posters are asked to stay with their presentations)
22:00 – 23:00	Social Hour / Drinks for purchase

Tuesday, October 7, 2025

06:30 – 08:00	Breakfast
08:00 – 10:10	**Session 4: Product Quality Control through ICB** Co-chairs: Megan McClure, Just-Evotec, Inc; Sonja Berensmeier, Technical University of Munich
08:00 – 08:05	Introduction
08:05 – 08:30	**Integrating PAT: Automated sampling, on-line analysis and real-time control of perfusion cell culture processes** James Angelo, Merck Life Sciences, USA
08:30 – 08:55	**Towards continuous bioprocessing: A Mid-infrared spectroscopy PAT for real-time monitoring** Alexander Geissler, IRUBIS GmbH, Germany
08:55 – 09:20	**Control of column switch time for continuous antibody capture based on mAb flowthrough concentration using in-line novel PAT** Maja Sondell, Lund University, Sweden
09:20 – 09:45	**Mechanistic modeling of retention time distribution for continuous Protein A affinity capture** Wu-Wei Chen, Zhejiang University, China
09:45 – 10:10	**Overcoming the challenges of freeze-drying biological drugs in unit-dose formats: Transitioning from batch to continuous processing** Robert Pisano, Politecnico di Torino, Italy
10:10 – 10:45	Coffee Break (*Sponsored by Novo Nordisk*)
10:45 – 12:15	**Concurrent Workshops** 1. **Debugging ICB – Next Generation Bioburden Control Upstream** Co-chairs: Gene Schaefer, NIIMBL; Riley Myers, NIIMBL 2. **Disruptive Technologies for Disruptive Products** Co-chairs: Linda Mathiasson, GE Healthcare; Nihal Tugcu, Sanofi; Todd Przybycien, Rensselaer Polytechnic Institute 3. **Unlocking the Promise of Distributed MFG via ICB** Co-chairs: Kelvin Lee, University of Delaware, NIIMBL; Scott M Wheelwright, BioChromatographix
12:15 – 13:30	Lunch
13:30 – 15:00	**Poster Session 2** (Authors of even-numbered posters are asked to stay with their presentations)
15:00 - 21:30	Off-site excursion to the old city of Dubrovnik
15:00	Meet at Sun Gardens Marina for a boat ride to the old city of Dubrovnik
15:30	Boat departs
16:30 - 18:00	Old city wall tour

<u>Tuesday, October 7, 2025</u> (continued)

18:00 - 20:00	Free time in old town / Dinner on your own
20:00 - 21:30	Buses begin departing at 20:00 from the Pile Gate, next to the entrance to old town, for transfer back to the hotel

Wednesday, October 8, 2025

06:30 – 08:00 Breakfast

08:00 – 10:45 **Session 5: ICB for Resolving Challenges in Continuous Downstream**
Sponsored by Sartorius Stedim Biotech GmbH
Co-chairs: Dong-Qiang Lin, Zhejiang University; Maarten Pennings, Arden Biopharma

08:00 – 08:05 Introduction

08:05 – 08:30 **Breaking barriers in biomanufacturing: A novel end-to-end continuous processing line**
Martin Lobedann, Sartorius Stedim Biotech GmbH, Germany

08:30 – 08:55 **Bulk crystallization for protein processing: New concepts, challenges and opportunities**
Dorota Antos, Rzeszow, University of Technology, Poland

08:55 – 09:20 **Sustainable, precipitation-based continuous downstream processing for mAbs**
Todd Przybycien, Rensselaer Polytechnic Institute, USA

09:20 – 09:45 **Implementation of viral filtration in a continuous end to end process**
Megan McClure, Just-Evotec Biologics, USA

09:45 – 10:10 **A 30 kg/day one-step process for continuous concentration, buffer exchange, and formulation of biologics**
Ujwal Patil, AstraZeneca, USA

10:10 – 11:00 Coffee Break (*Sponsored by NIIMBL and Pfizer*)

11:00 – 12:30 **Concurrent Workshops**

1. **ICB Sustainability by Design**
   Chair: Magali Barbaroux, Sartorius Stedim FMT SAS

2. **Optimal Facility Design for ICB**
   Co-chairs: Hemanth Kaligotla, Lonza Biologics; Kevin Ingham, Just Evotec

3. **Upstream and Downstream Integration – Challenges and Opportunities**
   Co-chairs: Andreas Castan, Cytiva, AdBIOPRO - Competence Centre for Advanced BioProduction by Continuous Processing; Riley Myers, NIIMBL

12:30 – 14:15 Lunch

14:15 – 17:10 **Session 6: ICB Large-Scale Implementation: Celebrating Achievements and Lessons Learned**
Sponsored by AstraZeneca
Co-chairs: David Garcia, Novartis Pharma; Weichang Zhou, MediLink Therapeutics (formerly WuXi Biologics)

14:15 – 14:20 Introduction

14:20 – 14:45 **Mitigating cell retention filter fouling for 2000L high-density perfusion culture**
Naomichi Hikichi, Fujifilm, Japan

14:45 – 15:10 **From lab to GMP: The manufacturing implementation of an integrated concept**
Benoit Mothes, Sanofi, France

Wednesday, October 8, 2025 (continued)

15:10 – 15:35	**Enabling high-productivity integrated continuous biomanufacturing through distributed control systems** Mingyue Fang, WuXi Biologics, China
15:35 – 16:20	Coffee Break (*Sponsored by Repligen*)
16:20 – 16:45	**Manufacturing-scale integrated continuous biomanufacturing: Implementation insights and lessons learned** Kevin Ingham, Just-Evotec Biologics, USA
16:45 – 17:10	**Overcoming challenges with scale-up and GMP implementation of an integrated dynamic bioprocessing (IDB) platform for multiple products** Nicole Bleckwenn, AstraZeneca,USA
17:15 – 18:05	**Keynote Presentation: ICB Award** **Advancing Integrated Continuous Bioprocessing to Transform Biologics Manufacturing** Weichang Zhou, MediLink Therapeutics (formerly WuXi Biologics), China
18:05 – 19:00	Break
19:00 – 19:45	Reception (Origano Terrace)
19:45 – 21:45	Conference Banquet (Origano Terrace)

Thursday, October 9, 2025

07:00 – 09:00	Breakfast
	Departures

Poster Presentations

1. **Innovative single-use system for preparation of concentrated stock solutions – A critical enabling technology developed for intensifying biomanufacturing processes**
   Mike Su, Genentech Inc., USA

2. **Intensification of oncolytic Newcastle disease virus production**
   Lennart Jacobtorweihe, Max Planck Institute, Germany

3. **Rational approach to reducing the viral contamination risk in integrated continuous biomanufacturing**
   Takao Ito, Merck Ltd., an affiliate of Merck KGaA, Germany

4. **Continuous purification from development to commercial scales**
   Joanna Pezzini, PAK BioSolutions, USA

5. **Continuos downstream process orchestration in Pionic platform**
   Alexandre Espachs Barroso, Sartorius Stedim Biotech GmbH, Germany

6. **Optimization of cell expansion phase parameters for a cost-effective lentiviral vector perfusion process**
   Marta Arrizabalaga Cascallana, University College London, UK

7. **An integrated perfusion process for cell culture-based production of an oncolytic VSV virus**
   Sven Göbel, University of Applied Sciences and Arts Northwestern Switzerland, Max Planck Institute Germany

8. **Does continuous processing have to be single use?**
   Mark Schofield, Cytiva, USA

9. **An intensified single-step, flowthrough polishing process: A closer look at aggregate and mock virus removal with Capto adhere**
   Kurt Boenning, Cytiva, USA

10. **Extraction of recombinant proteins from E. coli fermentation broths by polyethyleneimmine as efficient tool for process intensification**
    Rainer Hahn, BOKU University, Austria

11. **Towards Integrated Continuous Biomanufacturing of Aav**
    Thomas Villiger, FHNW, Switzerland

12. **Fully integrated and continuous precipitation-based process for the purification of mRNA**
    Maria del Carme Pons Royo, Massachusetts Institute of Technology, USA

13. **Approaches to virus filtration validation in continuous bioprocessing**
    Julie Kozaili, Asahi Kasei Bioprocess, USA

14. **Continuous operation enables cold ethanol precipitation of intravenous immunoglobulin G within one minute**
    Nico Lingg, BOKU University, Austria

15. **The journey towards a continuous rAAV production**
    Richard Plieninger, FHNW, Switzerland

16. **Paving technological gaps to transition into continuous bioprocessing of hPSC**
    Daniel Komuczki, Novo Nordisk A/S, Denmark

17. **Improving AAV8 purification with continuous affinity capture: From batch to continuous multicolumn chromatography**
    Ricardo Silva, iBET, Portugal

18. **From 500L to 2000L high cell density perfusion culture: Optimizing O2 delivery**
    John Raven, FUJIFILM Diosynth Biotechnologies, UK

19. **Towards seamless Mab purification: Dual step Mcc on the octave platform**
    Carsten-René Arlt, Tosoh Bioscience, Germany

20. **A combination of machine learning and CFD simulations to enable control and scaling of continuous bioprocesses**
    Christian Witz, SimVantage GmbH, Austria

21. **Continuous alkaline lysis of plasmid-containing *E. coli* cells using an oscillatory flow reactor**
    A. Rita Silva-Santos, iBB - Institute for Bioengineeering and Bioscences, Portugal

22. **No two runs alike: Cycle-to-cycle variation in recovery during virus membrane chromatography**
    Claire Velikonja, McMaster University, Canada

23. **Development of a small-scale continuous virus filtration model incorporating inline spiking and mixing**
    Ioana Pintescu, Asahi Kasei Bioprocess, USA

24. **Integrated purification of recombinant protein A from secreting *E. coli* – enabling simplified microbial bioprocessing through magnetic bare iron oxide nanoparticles**
    Julian Galbusera, Technical University of Munich, Germany

25. **Challenges experienced in steady state perfusion and development of a new dynamic perfusion platform**
    Charles Budde, Sanofi, USA

26. **Model-assisted process development of continuous chromatography for mRNA affinity capture**
    Liang-Zhi Qiao, Zhejiang University, China

27. **Q-learning agent-based level control of surge tanks for improved continuous manufacturing of monoclonal antibodies**
    Naveen Gurupatham Jesubalan, IIT Delhi, India

28. **A non-EBA method to load unclarified feed onto a well packed chromatography column**
    Zuwei Jin, Lisure Technology Co., USA

29. **End to end continuous viral particle production and purification**
    Caryn Heldt, Michigan Technological University, USA

30. **Control strategy: Where dynamic perfusion meets savvy automation**
    Nikunj Sharda, AstraZeneca, USA

31. **Integrated biomanufacturing through volume-independent magnetic separation and model-based optimization**
    Sonja Berensmeier, Technical University of Munich, Germany

32. **Developing an enterprise-wide implementation strategy for Integrated Continuous Purification Implementation at Sanofi**
    Michael Coolbaugh, Sanofi, USA

33. **Synthetic spectral libraries for Raman model calibration**
    Louis Hellequin, FHNW, Switzerland

34. **Scalable continuous flow zonal ultracentrifugation for purification of bionanoparticles**
    Viktoria Mayer, Austrian Centre of Industrial Biotechnology, Austria

35. **Implementation of a N-1 perfusion step in a continuous fed-batch mAb production process**
    Ronald Eimers, MSD Animal Health, the Netherlands

36. **Advancing cost-effective antibody production: Integration of low-cost ion exchange resins, radial flow chromatography, and process intensification through integrated buffer making with chromatography**
    Sanjeev Saxena, Sepragen, USA

37. **Multiple fill and drain operation: A promising strategy for cost reduction and sustainability in bioprocessing, supported by a high strength single-use film**
    Maria Mora, Merck, USA

38. **Study for cost-effectiveness of cell culture media in continuous manufacturing process**
    Yusaku Shimura, Kyowa Kirin Co. Ltd., Japan

39. **Application of ready-to-use raman calibration models in perfusion processes**
    Luis Ayala, Merck, Germany

40. **Improving perfusion performance via application of a perfusion-specific CLD workflow**
    Vince Balassi, Merck Ltd., an affiliate of Merck KGaA, Germany

41. **Automated continuous multi-column chromatography capture step for a secreted protein produced in *E. coli***
    Jürgen Beck, BOKU University, Austria

42. **Continuous purification of secretory IgA: From resin limitations to alternative ligand strategies**
    David Scheich, BOKU University, Austria

43. **Automated sensor system for on-line monitoring of monoclonal antibody titer**
    Fernanda Rebellato Giordano Martim, ArgusEye AB, Sweden

44. **Model-based control of tangential flow filtration and multi column chromatography in a continuous bioprocess**
    Wolfgang Sommeregger, QUBICON AG, Austria

45. **Benefit-Risk Assessment of advanced continuous manufacturing technologies**
    Ushma Mehta, MilliporeSigma, USA

46. **Sustainable integrated continuous antibody downstream processing using buffer intensification**
    Bernt Nilsson, Lund University, Sweden

47. **Mass transfer: A dual sparger approach for perfusion processes**
    Mauran Mahendra, Lonza Biologics, UK

48. **Extended recombinant adeno-associated virus production by continuous bioprocess in high cell-density perfusion bioreactors**
    Ye Zhang, KTH, Sweden

49. **Exploring the future of 500L scale hybrid continuous manufacturing**
    Shinsuke Kikuchi, Kyowa Kirin Co., Ltd., Japan

50. **Advancing biopharmaceutical manufacturing: A functional prototype approach to integrated continuous biomanufacturing at lab-scale**
    Thomas Kruse, Sartorius, Germany

51. **Impact of hollow fiber filter configuration on tangential flow filtration cell-retention performance in a continuous harvest CHO-based platform process**
    Rosemichelle Marzan, Just-Evotec Biologics, USA

52. **Enhancing biomanufacturing: A scaled-down continuous centrifuge for efficient cell harvesting and technology transfer**
    Michaela Dölle, Kungliga Tekniska Högskolan Stockholm, Sweden

53. **VMF: Disruptive Vibro® technology for continuous biomanufacturing processes**
    Jarno Robin, SANI Membranes, Denmark

54. **Optimizing control parameters in continuous processes using particle swarm optimization: A case study on Ph, conductivity, and flow rate**
    Elias Knöchelmann, Sartorius, Germany

55. **Continuous cultures of recombinant CHO cells by a perfusion cell culture system using a tangential flow filtration module with hollow fiber membrane and a bearingless pump**
    Duk Jae Oh, Sejong University, South Korea

56. **Raman monitoring perfusion bioproduction process of human pluripotent stem cells**
    Meeri Mäkinen, KTH Royal Institute of Technology, Sweden

57. **Advances in hybrid modeling for in silico optimization and supervisory control of perfusion cell culture processes**
    Gerben Zijlstra, Sartorius, the Netherlands

58. **AAV harvesting using an asymmetric pore hollow fiber membrane in TFF mode: High product yield through stable cake layer formation**
    April Wheeler, Asahi Kasei Bioprocess, USA

59. **Modeling and simulation of an integrated perfusion bioreactor with cell retention system**
    Karundev Premraj, Tata Consultancy Services, India

60. **Virus safety for continuous processing**
    Ruth de la Fuente, Cytiva, Germany

61. **Intensified manufacturing of therapeutic pre-miR-29b through continuous perfusion cultivations**
    Francesco Iannacci, Politecnico di Milano, Italy

62. **Continuous perfusion process design enabled by facile pseudo-perfusion experimentation and metabolic modeling**
    Nikola Malinov, University of Delaware, USA

63. **Flow-velocity gradient chromatography as a capture step for integrated continuous downstream process of biologics**
    Shuichi Yamamoto, Yamaguchi University, Japan

64. **The innovative flow-through solution for continuous viral inactivation**
    Johannes Wortmeyer, Sartorius, Germany

65. **Non--Capture Antibody Purification (NCAP): Investigating the dual functionality of core shell technology**
    Anna Hermanoska, UCB, UK

66. **Continuous culture in cell line development: Applications for plant secondary metabolite production**
    Lukas Leibetseder, acib GmbH, Austria

67. **Characterization of integrated BioPAT® Viamass for advanced perfusion process control in Ambr® 250 High Throughput Generation 2**
    Ellen Lam, The Automation Partnership (Cambridge) Ltd, Sartorius Stedim, UK

68. **Non-Capture Antibody Purification (NCAP) a cost-effective & continuous process**
    Sravan Pandalaneni, UCB, UK

69. **Monitoring antibody titer in high cell density perfusion process with miniaturized nanoplasmonic sensor**
    Maxime Hervé, KTH Royal Institute of Technology, Sweden

70. **Scalable solutions in continuous bioprocessing: Evaluating SP-TFF devices for mAbs**
    Martin Leuthold, Sartorius, Germany

71. **Bioprocess intensification and optimization using macroscopic predictive models of cell culture processes**
    Neil Kearney, UCB Pharma, Belgium

72. **Protein A EBA, the modern solution to Mab capture from continuous chromatography systems**
    Neil Watson, UCB, UK

73. **Building the business case for continuous manufacturing in biologics, a strategic framework for assessing, comparing, and justifying continuous bioprocessing investments**
    Richard Steiner, Pharmatech Associates, Canada

74. **A novel single-use perfusion bioreactor without a mixing impeller that operates with reduced shear and lower cost**
    John Benson, CP Biotools LLC, USA

75. **Predicting the environmental footprint of continuous mAb processes**
    Felix Dieringer, BOKU University, Austria

76. **EnzeneX™ 2.0 and the power of Fully-Connected Continuous Manufacturing™: Driving down mAb costs to $40/gram**
    Arindam Chakraborty, Enzene, India

77. **Plasmid DNA (pDNA) production for gene-based therapeutics: Overcoming downstream bottlenecks with next-generation monolithic QA IEX chromatography media**
    Scott M. Wheelwright, BioChromatographix International Pte. Ltd., Singapore

Upcoming ECI Conferences

2025

INTEGRATED CONTINUOUS BIOMANUFACTURING VII
October 5 – 9, 2025
I. Ramos, Johnson & Johnson; M. Brower, Merck; A. Jungbauer, BOKU; K. Brower. Sanofi
Dubrovnik, Croatia

ELECTROPHORETIC DEPOSITION VIII: FUNDAMENTALS AND APPLICATIONS
October 12 – 16, 2025
A.R. Boccaccini, University of Erlangen-Nuremberg; B. Ferrari, Institute for Ceramic and Glass, Spanish Research Council; A.J. Brookhaven National Laboratory; F. Grasset, IRL LINK, CNRS; K. Katagiri, Hiroshima University
Calabria, Italy

ENZYME ENGINEERING XXVIII
October 19 – 24, 2025
J. Woodley, DTU; D. Hededam-Welner, DTU
Helsinger, Denmark

CERAMIC MATRIX COMPOSITES III
October 26 – 31, 2025
R. Darolia, GE Aerospace; K. Goto, JAXA; G. Vignoles, University of Bordeaux; S. Kitaoka, Japan Fire Ceramics Center; T. Akatsu, Tokyo University of Technology
Yamanashi, Japan

BENEFICATION OF PHOSPHATES X
November 2 – 7, 2025
Chair: Patrick Zhang, Florida Industrial and Phosphate Research Institute, USA; Co-Chairs: Phong Vo, Ardaman & Associates Inc, USA; Erika Rova, Yara Suomi Oy, Finland; André Carlos Silva, Federal University of Goiás, Brazil; Ewan Wingate, Bechtel Australia, Australia
Hanoi, Vietnam

2026

INNOVATIVE MATERIALS & METHODS FOR ADDITIVE MANUFACTURING III (IM2AM)
January 11 – 16, 2026
B. Compton; University of Tennessee, Knoxville; E. Eastwood, KCNSC; N. Gupta, New York University; D. Schmidt and J. Gonzalez-Gutierrez, Luxembourg Institute of Technology; P. Cortes, University of Texas at El Paso
Savannah, Georgia, USA

ADVANCING MANUFACTURE OF CELL AND GENE THERAPIES IX
February 1 – 5 2026
J. Moscariello; C. Hoesli, McGill University; B. Marques, CenturyTC
Hilton Head, SC, USA

Upcoming ECI Conferences

ENG2WINE: INDUSTRY CHALLENGES AND INNOVATIVE ENGINEERING SOLUTIONS

March 22-26, 2026

D.E. Block, University of California Davis, USA; D. Durner, University of Applied Sciences Kaiserslautern, Germany; D. K. Kundiyana, E & J Gallo Winery, USA

Porto, Portugal

DELIVERY OF NUCLEIC ACID THERAPEUTICS III: BIOLOGY, ENGINEERING AND DEVELOPMENT

April 9 – 13, 2026

L. Sepp-Lorenzino, Intellia Therapeutics; S. F. Dowdy, University of California San Diego School of Medicine; M. Stanton, Generational Bio

Croatia

VACCINE TECHNOLOGY X

April 12-17, 2026

T. Tagmyer, PATH; N. Alteras, Moderna; S. Frank, UCL; D. Cowley, AstraZeneca

Porto, Portugal

NANOTECHNOLOGY IN MEDICINE V: PHYSICAL TRIGGERS AND ADVANCED MATERIALS

April 19-23, 2026

R. Fernandes, George Washington University; J. Nguyen, University of North Carolina at Chapel Hill; A. Schroeder, Technion

Giardini Naxos, Messina, Sicily, Italy

WASTELCA 5: NEW TOOLS FOR LIFE CYCLE SUSTAINABILITY ASSESSMENT OF MUNICIPAL AND CHALLENGING WASTE MANAGEMENT

June 7 – 12, 2026

U. Arena, University of Campania “Luigi Vanvitelli”, Italy; A. Damgaard, DTU, Denmark; M. Materazzi, UCL, UK; F.Ardolino, University of Campania “Luigi Vanvitelli”, Italy

Cetraro (Calabria), Italy

July 19 – 23, 2026

BIOCHEMICAL AND MOLECULAR ENGINEERING XXIV

D. Tullman-Ercek, Northwestern University; M. Blenner, University of Delaware; A. Lewis, Moderna

Puerto Rico

NANOMECHANICAL TESTING IN MATERIALS RESEARCH AND DEVELOPMENT X

October 4 – 9, 2026

Conference Chair: Verena Maier-Kiener

Montan Universität Leoben, Austria

October 12 – 15, 2026

SINGLE USE TECHNOLOGIES VIII

N. Montenay, Sartorius; G. Gillespie, North Carolina State University; P. Smith, GSK

Montreal, P.Q., Canada

Engineering Conferences International

Engineering Conferences International (ECI) is a not-for-profit global engineering conferences program that has served the engineering/scientific community since 1962 as successor program to Engineering Foundation Conferences. ECI has received recognition as a 501(c)3 organization by the U.S. Internal Revenue Service and is incorporated in the State of New York as a not-for-profit corporation.

The program has been developed and is overseen by volunteers both on the international Board of Directors and international Conferences Committee. More than 1,900 conferences have taken place to date. The conferences program is administered by a professional staff and the conferences are designed to be self-supporting.

ECI Mission

To serve the engineering/scientific community with international, interdisciplinary, leading edge engineering research conferences

ECI Purposes

The advancement of engineering arts and sciences by providing a forum for the discussion of advances in the field of science and engineering for the good of mankind by identification and administration of international interdisciplinary conferences

To work with engineering, scientific and social science societies and the interested general public to jointly sponsor conferences and to take other actions that will foster complementary programming.

To initiate conferences that will have a significant impact on engineering education, research practice and/or development.

ECI Encouragement of New Conference Topics

The ECI Conferences Committee invites you to suggest topics and leaders for additional conferences and encourages you to submit a proposal for an ECI conference.

Ideally, proposals should be submitted from 18 to 24 months in advance of the conference although the staff can work on a shorter timeline.

The traditional format for an ECI conference is registration Sunday afternoon with technical sessions held each morning and evening through Thursday or Friday noon. Afternoons are used for informal gatherings, poster sessions, field trips, subgroup meetings and relaxation. This format has served well to build important professional networks in many areas.

ECI welcomes proposals for shorter conferences and for conferences which span weekends in order to reduce the number of working days participants are away from their offices.

ECI Works With You

ECI works with conference chairs in two complementary ways. First, an experienced member of the Conferences Committee acts as your technical liaison from the proposal stage through the conference itself. He or she is always available to consult with you on any conference issue.

Second, after your proposal has been approved by the Conferences Committee, the ECI staff will assume responsibility for the administration of the conference.

Your primary responsibilities will be recruiting the organizing committee, developing the technical program and securing third-party funding necessary to support the travel of key speakers.

The responsibilities of ECI's "full service" staff include -- but are not limited to -- the following:

- Recommend, negotiate, contract and make substantial deposits for housing, meals, meeting space, A/V equipment and tours.
- Maintain web sites for the conference and for submission of abstracts.
- Publicize via electronic and print media.
- Administer all finances including grants, contributions and purchase orders. (ECI makes grant funds available as soon as a grant is approved.) There is no need for chairs to set up a conference bank account or file tax returns for their conference.
- Process all applications and registrations.
- Produce bound program/abstracts book.
- Contract for the publication of print or electronic proceedings, if any.
- Provide on-site staff during the conference.

For more information, please contact the ECI Director at Barbara@engconfintl.org