

Advanced Fermentation Technology 2026 *New frontiers in Industrial Biotechnology*

1.5-day Scientific Congress
Bridging Fundamental Research and Industrial Innovation

30 June – 1st July 2026 – University of Lille

Day 1 – Scientific Advances and Technological Innovations

- 08:00-09:00 Welcoming
- 09:00-09:30 Opening Session
Franck DUMEIGNIL, *University of Lille, France*
- 09:30-10:15 Plenary conference
Christoph HERWIG, *Körber Pharma, Austria*
The Potential of Digital Tools to Bridge Research Innovations to Viable Bioprocesses
- Coffee break*

Session 1 - Selecting and Engineering Robust Strains for efficient fermentation

Chairs: *François COUTTE*, *University of Lille, France* and *Philippe JACQUES*, *University of Liège, Belgium*

Focus: *This session focuses on designing robust microbial strains adapted to real industrial constraints, including scale-up, downstream purification, and process integration. It highlights the use of techno-economic and model-guided frameworks combining metabolic, process, and cost modelling to guide early strain and process development. Key discussions will address how predictive and AI-enhanced models can support scalable, energy-efficient, and cost-competitive bioprocess design under market and regulatory constraints.*

Claus LATTEMANN, *Lesaffre International, France*

Lisbeth OLSSON, *Chalmers University of Technology, Sweden*
Microbial robustness- a key to efficient bioprocesses

Flash poster presentation Session 1

Lunch & Poster Session

Session 2 - Advanced Fermentation Systems

Chairs: *Nathalie GORRET*, *TBI, France* and *Petra HEIDINGER*, *Acib GmbH, Austria*

Focus: *This session will highlight advances in fermentation system design that enable a robust transition from laboratory to industrial scale. It will address innovations in bioreactor technologies, automation, and process intensification, with a strong focus on scale-up methodologies and early techno-economic evaluation. Discussions will center on how integrated engineering and economic tools can improve productivity, reliability, and cost efficiency across diverse fermentation platforms.*

Petra HEIDINGER, Acib GmbH, Austria
From CO₂ to Protein: Advancing Pilot Scale Gas Fermentation with C. necator

Nico CRUZ BOURNAZOU, TU Berlin, Germany

Flash poster presentation Session 2

Coffee break & Poster Session

Session 3 - Control Strategies, Machine Learning and Digital Twins for Bioprocess Design

Chairs: **Frank DELVIGNE**, University of Liège, Belgium and **Nico CRUZ BOURNAZOU**, TU Berlin, Germany

Focus: *This session will focus on sensors, process analytics, and data-driven control strategies enabling real-time monitoring and optimization of fermentation processes. It will highlight the role of AI, hybrid models, and digital twins in improving process robustness, scale-up predictability, and decision-making across the bioprocess lifecycle. Key discussions will address model reliability, techno-economic trade-offs, and the validation of digital control frameworks under industrial constraints.*

Moritz VON STOSCH, HINA Bioventures, Switzerland
How digital tools can support scale-up: Using hybrid modeling and transfer learning for across scale predictions

Alex FEDOREC, University College of London, United Kingdom
Reinforcement learning for the control of microbial communities in bioreactors

Flash poster presentation Session 3 & 4

Poster Session (Beer, wine and Cheese)

Day 2 – Translational Research and Industrial Collaboration

Session 4 - Autonomous Bioprocessing for Industrial Scalability

Chairs: **Marcin ŁUKASZEWICZ**, University of Wrocław, InventionBio, Poland and **Julien BOUTET**, Sequens, France

Focus: *This session will focus on the transition toward autonomous and continuous bioprocessing through the integration of upstream fermentation and downstream purification. It will highlight process design, control, and integration strategies that enhance productivity, robustness, and resource efficiency. Discussions will emphasize the role of techno-economic evaluation in guiding decisions from pilot to full-scale industrial operation.*

Anna-Lena HEINS, University of Hamburg, Germany
How much do we need to monitor and control for development of scalable, high-yielding and robust bioprocesses?

Marie Jane FALLOURD, Fermentalg, France

Industrial sponsor presentation

Chair: Rozenn RAVALLEC, *University of Lille, France*

Seqens

Tetra Pak France

Bioeconomy For Change - B4C

Coffee break & Poster Session

Session 5 - Translational Bioprocessing: From laboratory scale to Industry

Chairs: Anthony BRESIN, *AnBreiL, France* and **Elodie WATTEZ**, *Ingredia, France*

Focus: *This session will address how to translate laboratory-scale innovations into industrial bioprocesses by aligning scalability, regulatory compliance, and economic viability. It will highlight technology transfer models, pilot and demo-scale infrastructures, and sector-specific constraints across food, pharma, green chemistry, and bio-based materials. Key discussions will focus on overcoming technical and regulatory bottlenecks through stronger collaboration between academia, industry, and regulators.*

Muriel BARDOR, *Alga Biologics, University of Rouen, France*

From Fundamental research regarding the protein N-glycosylation pathways in microalgae to the production of microalgae-made biologics at industrial scale

Ildar NISAMEDTINOV, *Lallemand, Estonia*

From ideation to execution: essential steps in industrial bioprocess development

Ghislain SANHAJI, *ARD, France*

Rémi PRADELLES, *Microphyt, France*

Microphyt - From Lab to Market: Scaling Microalgae Production and Extracts for Industry

Presentation Bioindustry 4.0

Audrey MAGNIN, *Bioeconomy For Change, France*

Round table Discussion

Chairs: Jean-Pierre LEAC, *SATT Nord, France* and **Lionel GENETELLI**, *University of Lille, France*

Theme: *This roundtable will explore how the convergence of systems biology, data science, artificial intelligence, equipment and bioprocess engineering can redefine the future of fermentation and bioproduction. In addition to scientific and technological challenges, the discussion will address the evolving economic landscape and funding environment for breakthrough biotechnology projects, particularly in fermentation-based innovations.*

Christoph HERWIG, *Körber Pharma, Austria*

Michael KREL, *Sofinnova Partners, France*

Pierre MONSAN, *INSA Toulouse, France*

Guillaume BOISSONNAT-WU, *Pili, France*

Christophe LUGUEL, *Bioeconomy For Change - B4C, France*

Etienne VERVAECKE, *Pôle NSL / EURASANTE*

13:00-13:30 **Closing session and Poster Prices**

13:30-14:15 **Networking Lunch**

14:15-16:00 **PUI event & Lab visit**

Conclude the congress with a convivial moment to learn more about opportunities for collaboration with public research alongside the business development team of the Pôle Universitaire d'Innovation Lille (PUI Lille).

14:15-14:30 **Presentation of PUI Lille**

A brief introduction to PUI Lille, highlighting opportunities for companies to collaborate with academic research, along with selected examples of existing partnerships.

14:30-15:00 **Coffee break & networking**

Participants will have the opportunity to meet and exchange informally with PUI Lille business developers.

15:00-16:30 **Lab and platform tours (limited places)**

Optional visits to [REALCAT](#) or [BioEcoAgro facilities](#)

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