



## Session 1 – Selecting and Engineering Robust Strains for efficient fermentation

**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.