



Session	TO-BE-START-UPS looking for Finance: pre-seed/angel/seed funding and/or partners
Title	Predicting bioprocess scalability and microbial robustness with microfluidic single-cell cultivation
Company	BiProMicro
Speaker	Dr. Julian Schmitz
Keywords feedstock (max. 2)	Bioprocess-dependend
Keywords technology (max. 2)	Microfluidic cultivation
Keywords End-Product (max. 2)	Scalability prediction
Abstract:	
BiProMicro is developing a microfluidic technology that addresses one of the most underestimated challenges in industrial biotechnology: scaling up microbial production processes. While strains often perform well under ideal lab conditions, many fail in large-scale bioreactors due to environmental fluctuations resulting in costly delays, lower yields, and failed investments. Our platform offers an early-stage robustness test for single cells under dynamic, production-relevant conditions on a microfluidic chip. By mimicking real-world fluctuations in nutrient availability, temperature, oxygen or other bioprocess-critical parameters, BiProMicro identifies which microbial strains are robust enough for industrial use - long before expensive scale-up begins. This reduces risks, saves resources, and accelerates time-to-market. Backed by the EU-funded “Start-up Transfer.NRW” program, BiProMicro is now preparing for spin-off to support biotech companies in the enzymes, food additives, and bioplastics sectors in developing scalable, sustainable, and resilient bioprocesses. We are currently seeking strategic development partners to validate our platform technology as well as pilot customers in the biomanufacturing industry.	