



Session	Emerging Innovative Technologies: Novel Fermentation and Downstream Processing Innovations
Title	Pioneering the use of sound as a new lever in biology
Company	HypeSound
Speaker	Dr Johnny Drain - CEO
Keywords feedstock (max 2)	Microbes Bioreactors
Keywords technology (max 2)	Acoustic-bioprocessing AI/ML
Keywords End-Product (max 2)	Biomass yield Bioproducts
Abstract:	
HypeSound is introducing sound as a programmable input for cells, opening a new dimension of control in fermentation and bioprocessing. Our platform applies low-frequency acoustic stimulation to enhance microbial and cellular productivity — increasing yields, accelerating growth, and improving product purity without additives, genetic modification or invasive probes. We combine retrofit acoustic hardware with an AI-driven control layer, enabling real-time optimisation across algae, yeast, bacteria, and mammalian systems. By turning sound into a scalable, GMP-compatible bioprocess lever, HypeSound addresses one of biotechnology's biggest bottlenecks: unlocking higher performance from existing fermentation infrastructure. This breakthrough paves the way for more efficient biomanufacturing across food, feed, biomaterials, and biopharma. Early trials show +320% increase in microalgae productivity and improved purity from 70% to 95%, delivering modelled 40–60% reductions in cost per kilo.	