Session	Microbial Protein & Microbial Oils Transition Players
Title	GlycoTune: Next-generation glycosylation engineering in *Pichia* for consistent, safe, and scalable glycoprotein production
Company	VIB – Ghent University
Speaker	Katrien Claes
Keywords feedstock (max 2)	*Pichia*-promoter compatible
Keywords technology (max 2)	*Pichia/Komagataella* glyco-engineering
Keywords End-Product (max 2)	Homogeneous glycoproteins

Abstract:

Glycoproteins are central to a wide range of biopharmaceutical, agricultural, and industrial applications. However, their production in microbial eukaryotes like *Pichia* is often hampered by glycan heterogeneity. This can lead to significant challenges in product safety, batch-to-batch consistency, DSP, and QA/QC. Currently, two main strategies exist to address glycosylation issues: (1) mutating the protein sequence, or (2) using first-generation glyco-engineered strains. While mutations often pose regulatory or protein stability issues, the first-generation glyco-engineered strains show inadequate performance.

VIB's new *Pichia* GlycoTune platform offers a robust alternative. Our engineered highly performant *Pichia* strains enable precise glycan trimming to either a single GlcNAc or a uniform $GlcNAc_2Man_5$ structure with >95% conversion efficiency. Both glycoforms of precision fermented human food proteins have already received 'no objections' letters from the FDA.

The *Pichia* GlycoTune platform is fully owned and patent-protected by VIB and available for licensing and joint development. Developed by the team behind one of the 1st gen *Pichia* glyco-engineering platforms, GlycoTune represents a 2nd gen leap, backed by 25 years of deep knowhow, offering top guidance for your glycoprotein engineering & manufacturing projects. Combined with VIB's OPENPichia, a royalty- and license-free strain collection for research and commercial use, GlycoTune empowers robust glycoprotein production.