

# Protein Production in *Pichia*: High yield and Low O-glycosylation Platform

Nathalie Pirlot<sup>2</sup>, Scientist, New Technologies Development, Eurogentec Biologics  
Toru Watanabe<sup>1</sup>, Biologics Research Groupe Biotechnology Research Laboratories, Kaneka

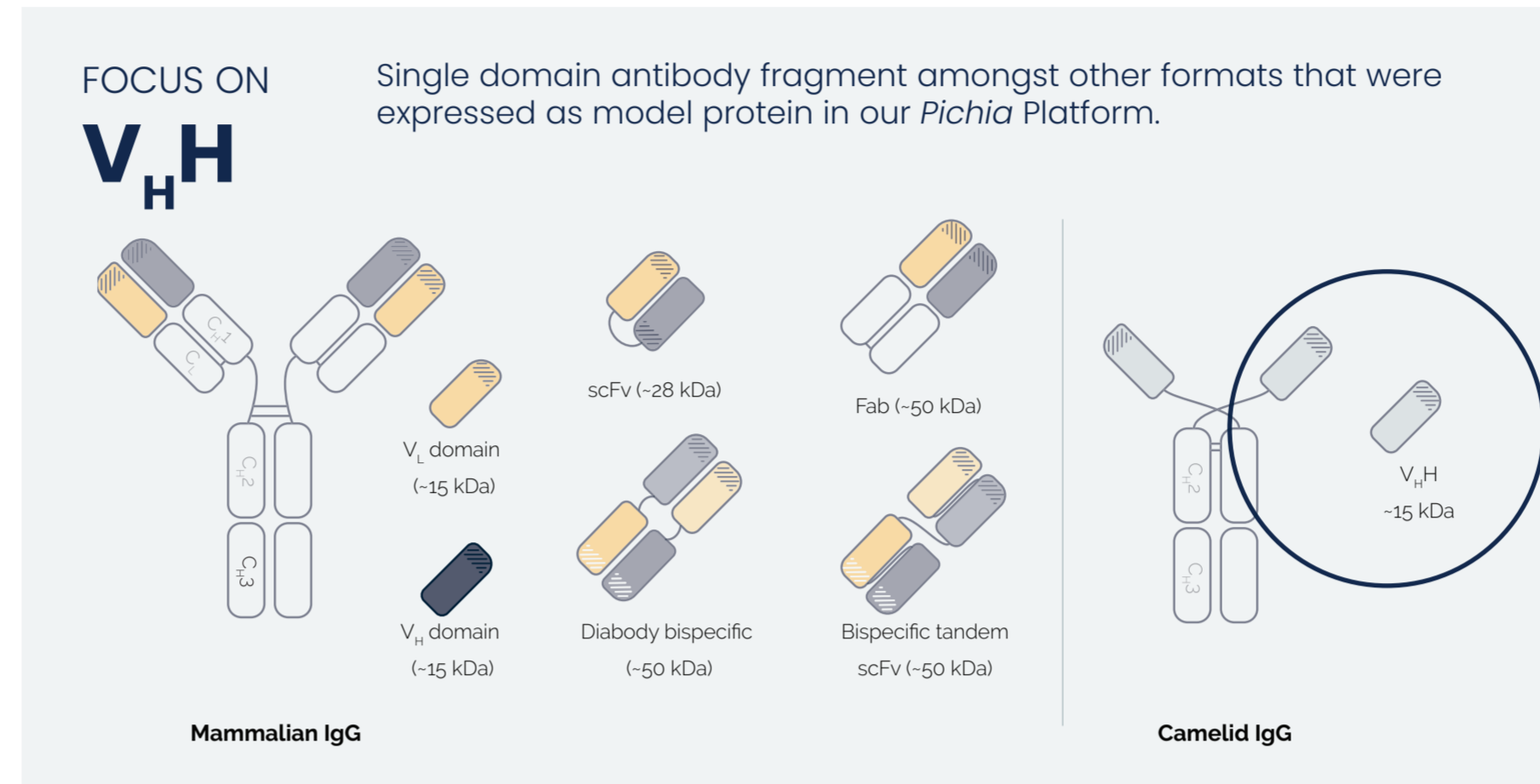
<sup>1</sup>Kaneka Corporation, 1-8, Miyamae-cho, Takasago-cho, Takasago, Hyogo 676-8688, Japan;  
<sup>2</sup>Kaneka Eurogentec S. A., 14, rue Bois Saint-Jean, 4102 Seraing, Belgium

Learn more about GMP antibody fragments



## Introduction

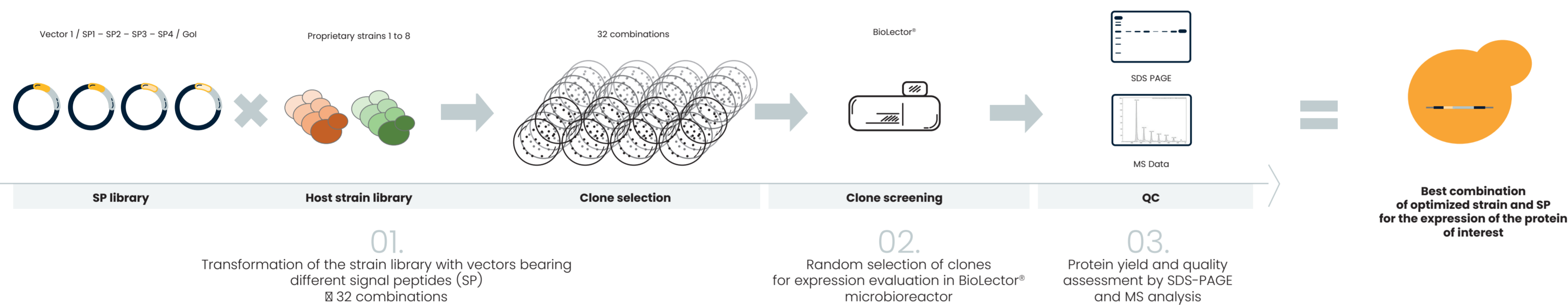
Kaneka Eurogentec is a well-established, FDA inspected, full-service biopharmaceutical CDMO producing recombinant proteins by microbial fermentation for preclinical, clinical and commercial uses. Together with Kaneka Corp., the company is continuously improving its technological expertise for recombinant proteins production through the development of new microbial expression systems. The combination of our panel of **optimized *Pichia pastoris* strains** and our **multicopy strategy** offers a powerful expression platform for **low O-glycosylated** proteins (available for licensing).



## Methods

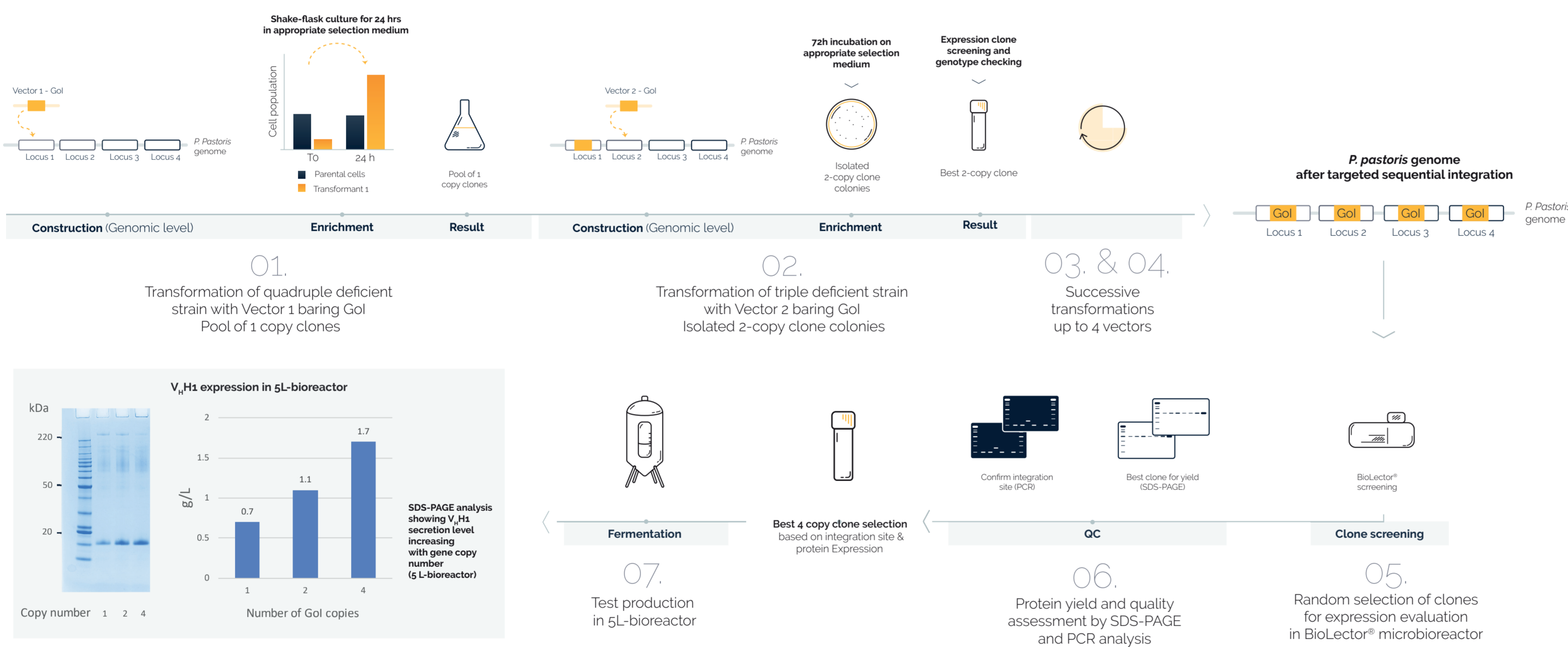
### Strain library screening

Combination of different signal peptides and engineered strains



### Multi-copy platform

Targeted sequential integration of a gene of interest (Gol) in *P. pastoris* genome

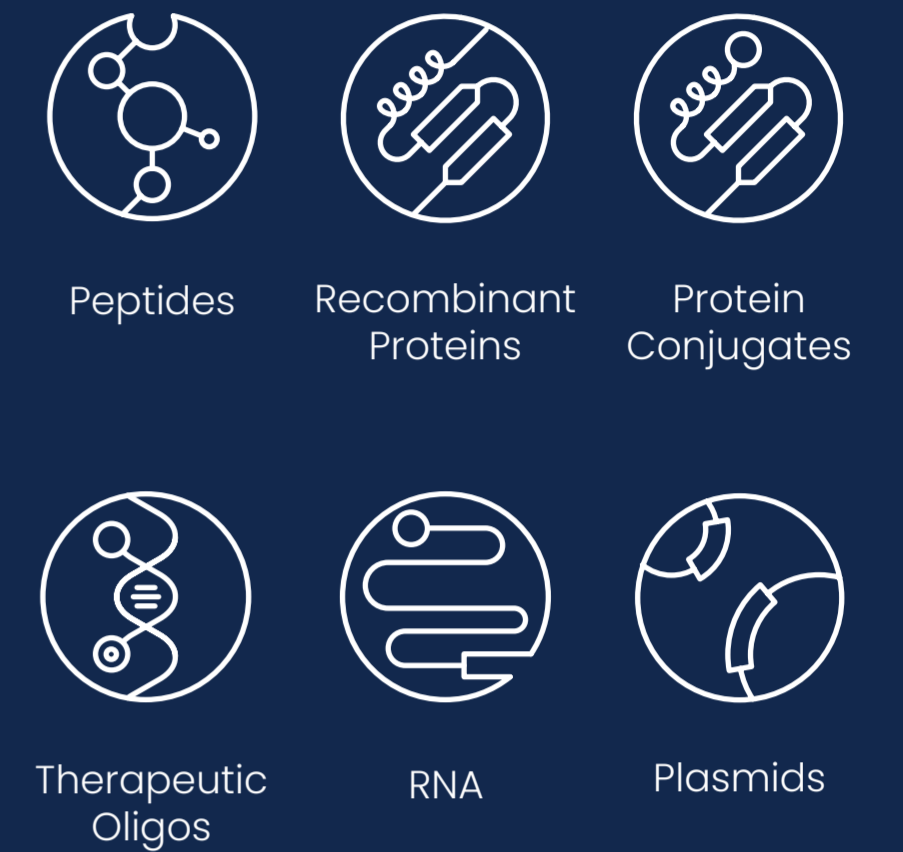


## Eurogentec at a glance

**One Stop Shop**  
From Tox/API to Commercial

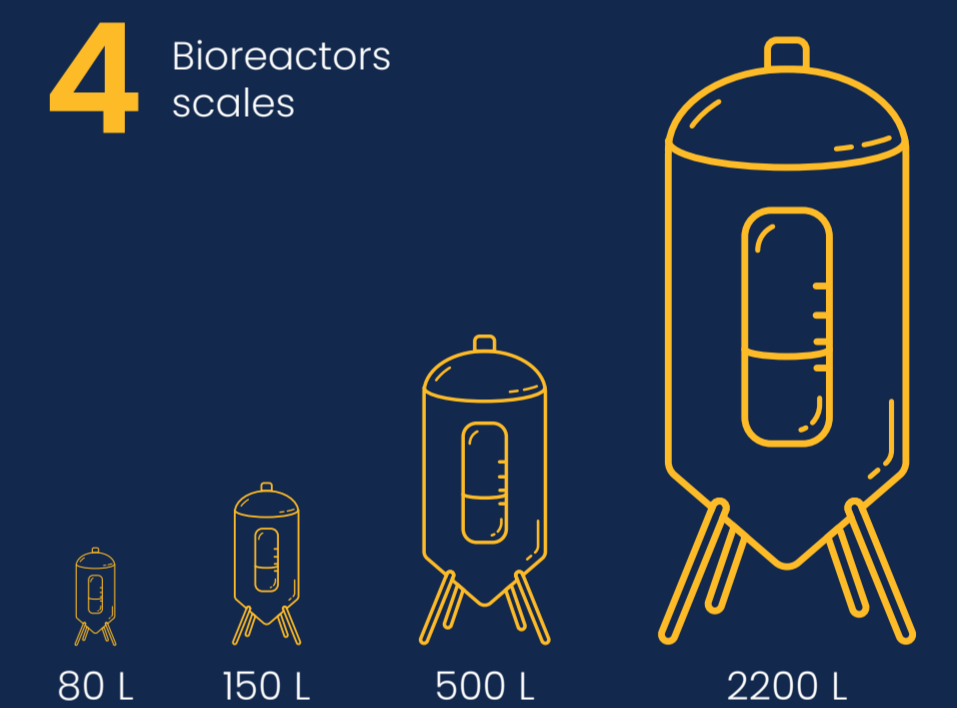
Eurogentec is a well established, FDA inspected, full-service CDMO producing GMP plasmid DNA, RNA and recombinant proteins for preclinical, clinical and commercial supply.

### GMP Products



**200+** Products developed  
**750+** GMP Batches

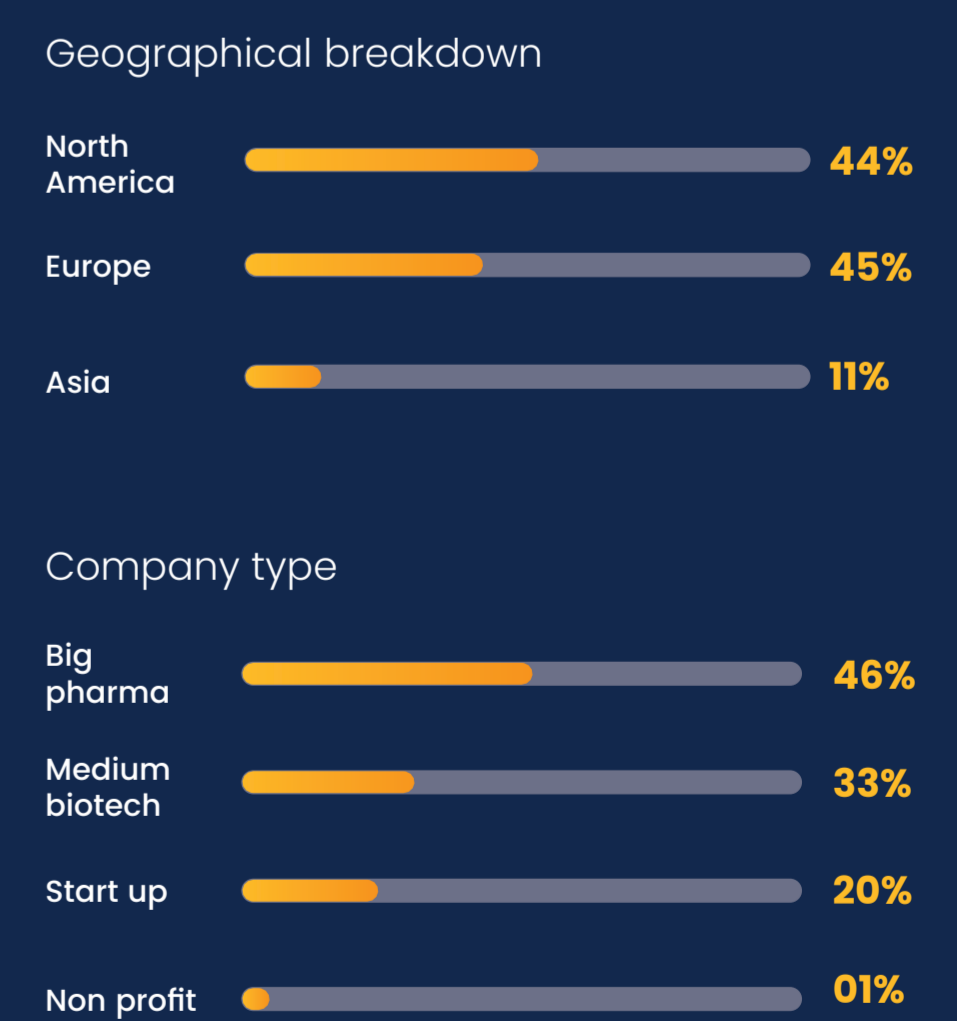
### Manufacturing scales



**25+** years of customer services

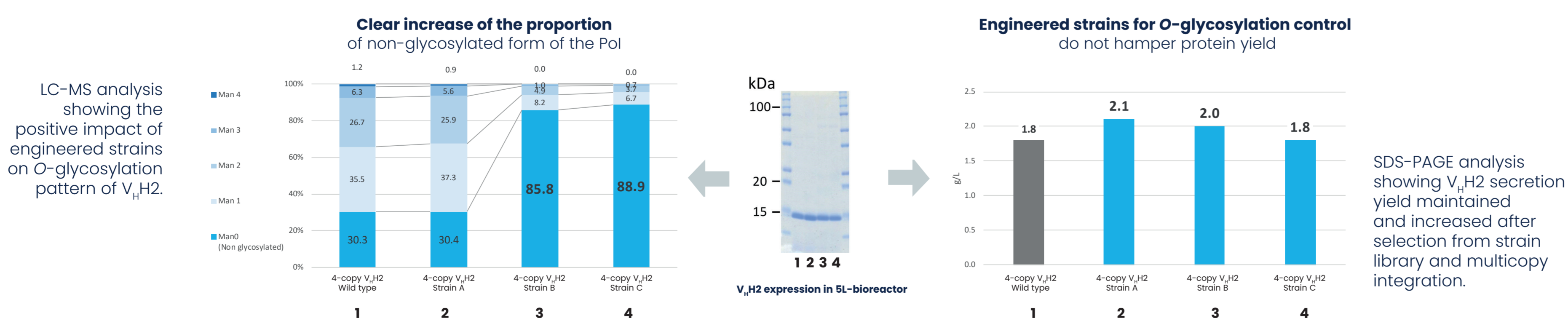
**GMP inspected**  
Since 1994 for EU  
Since 2011 for US FDA

### Projects



## O-Glycosylation reduction in V<sub>H</sub>H production

Combination of our optimized strains screening and our multicopy approach:  
Positive impact on O-Glycosylation level and secretion yield of the Pol



This research was supported by AMED under Grant Number JP17ae0101004h0005

## Conclusion

Here we describe the development of our optimized expression strains library and its combination to our multicopy strategy to enhance our ***Pichia* Production Platform** (available for licensing). These new engineering strategies coupled to our efficient fermentation conditions (without need of O<sub>2</sub> supply) lead to **high yields** and/or **low O-glycosylation** level of the protein of interest.

### CONTACT US

For CDMO services, contact us at [BIO.BD@eurogentec.com](mailto:BIO.BD@eurogentec.com)

To get additional information, please visit : [WWW.eurogentec.com](http://WWW.eurogentec.com)