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Using GlycoExpress for production of highly active antibodies directed against novel and existing targets

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Glycosylation is one of the major post-translational modifications of bio-therapeutics important for bioactivity, bioavailability, immunogenicity and patient coverage. By establishment of the GlycoExpress™ toolbox (GEX™) we have generated a set of glycol-engineered human cell lines for the high yield production of fully human glycoproteins to optimize the glycosylation of antibodies and non-antibody bio-therapeutics for improvement of the clinical efficacy and side effects. The system is biotechnologically superior in quality, reproducibility and yield compared to other, including conventional production systems. All four clinical products derived from GlycoExpress cells are produced using a perfusion bioreactor system in order to assure highest possible product quality and reproducibility combined with high yield production. Cells are kept in the optimal growing and production phase over the production process which leads to highly stable product quality allowing a flexible duration of the run in one batch size, in combination with stable high productivity of the cells over time. Furthermore the product qualities produced in different scales ranging from 1 L to 200 L bioreactors are highly comparable.

Biography

Steffen Kreye is a leading scientist at Glycotope GmbH. He is responsible for the development and optimization of the in-house developed and FDA-approved GlycoExpress cell line through metabolic engineering as well as the improvement of the established GlycoProcess. Since 2012 he is part of Glycotope's Upstream Process Development Group. Before the appointment at Glycotope, he studied Biotechnology at the University of Technology in Braunschweig, where he gained his Bachelor and Master of Science. His Masters included a year-long exchange at the University of Waterloo, Canada.

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