
Lectin based Assays for Glycan analytics



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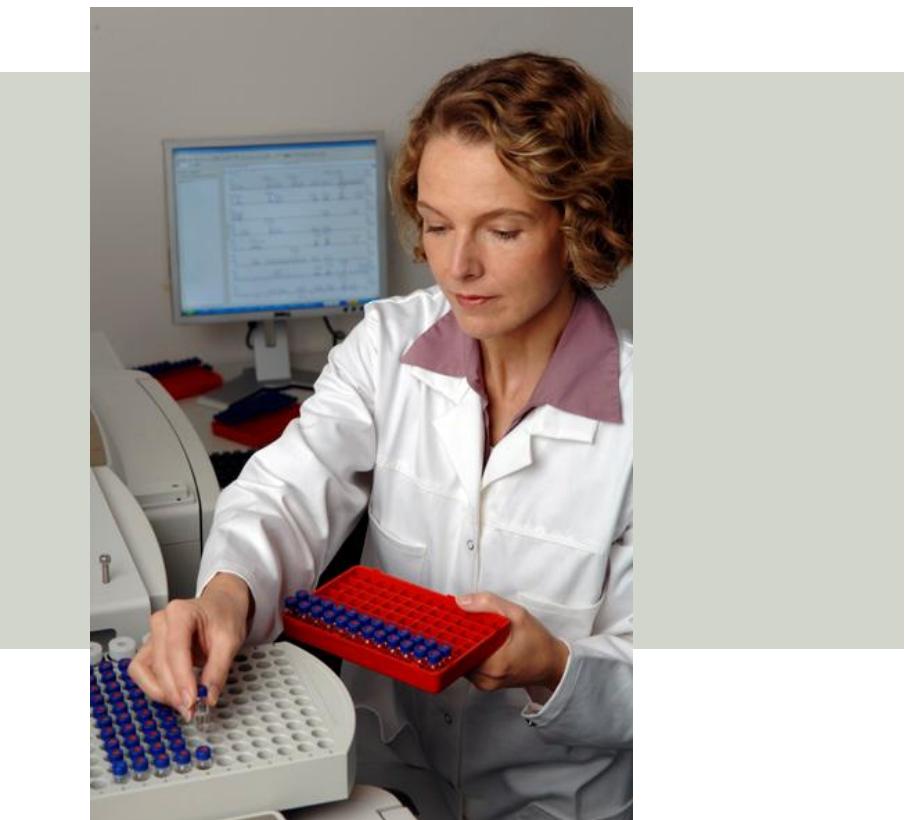
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Mission of GALAB Technologies GmbH

GALAB - Tools for Glycosciences®

we develop and produce
analytical assays and
purification products
for glycoscience
and glycobiotechnology



located in Geesthacht, near Hamburg



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Tools for Glycosciences - Portfolio



QIAGEN

Purification, Sample Preparation
Affinity columns, kits, resins

**Glycoscience
Research**

**Process
Development**

Quality control



Glycan Analytics, Glycoprofiling
Glycolimage® - lectin based assays

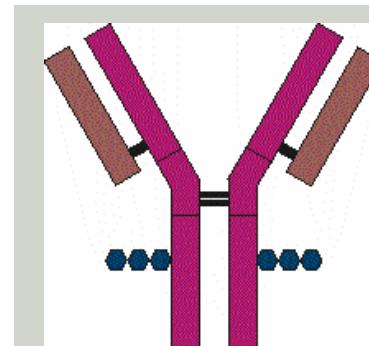


Lectin based Assays - Fields of Application

Glycan profiles of intact glycoproteins and complex biological samples

1) Biopharmaceuticals: Therapeutic Antibodies

- Research
- Upstream-Development (Clone selection)
- Downstream Development
- Quality control



2) Food: Milk and milk products

- Identification, isolation of bioactive compounds
- Process development and QC





Glycolimage® - Technology

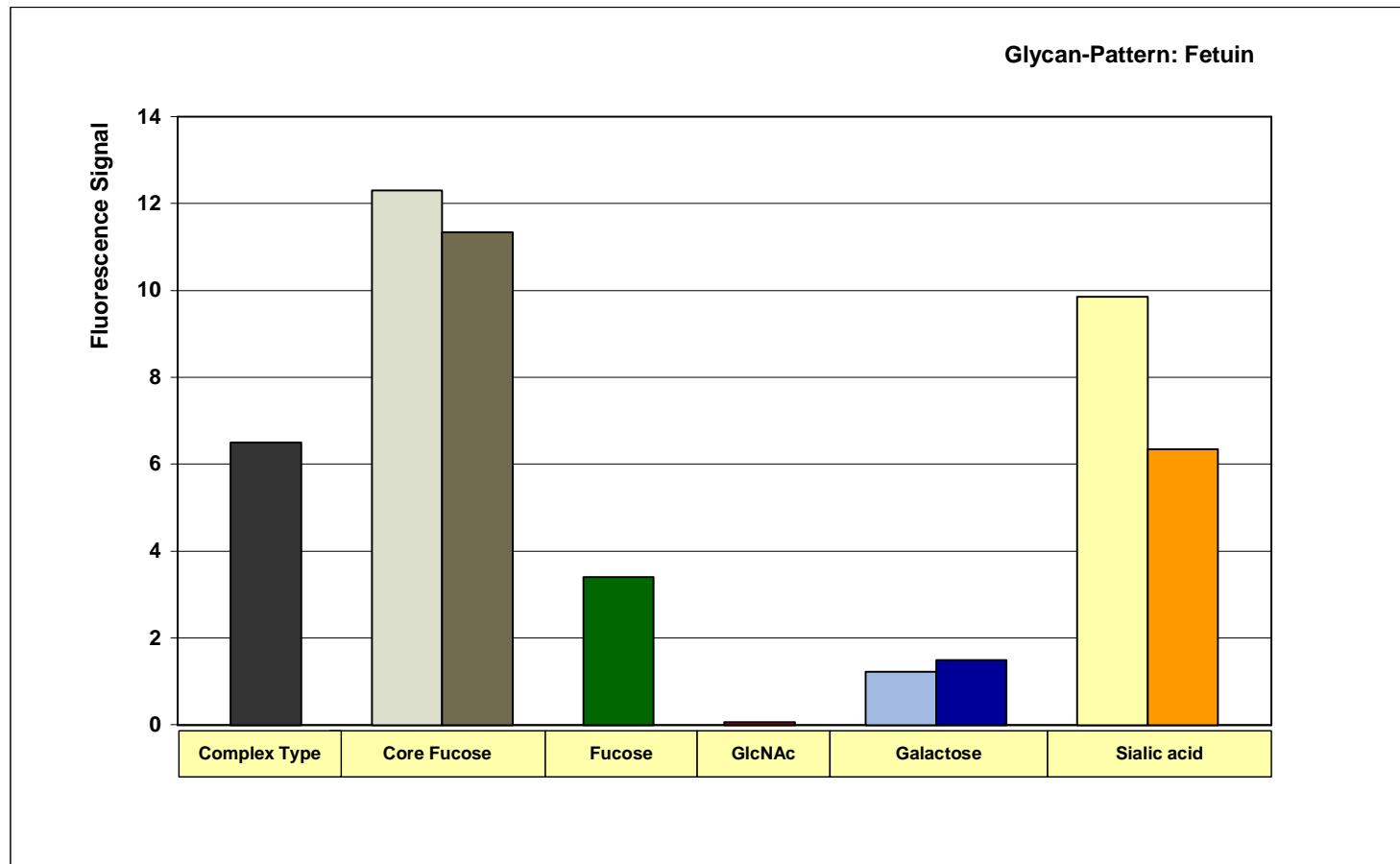
Direct Assay

- Labeled glycoprotein or detector molecule produces fluorescence signal

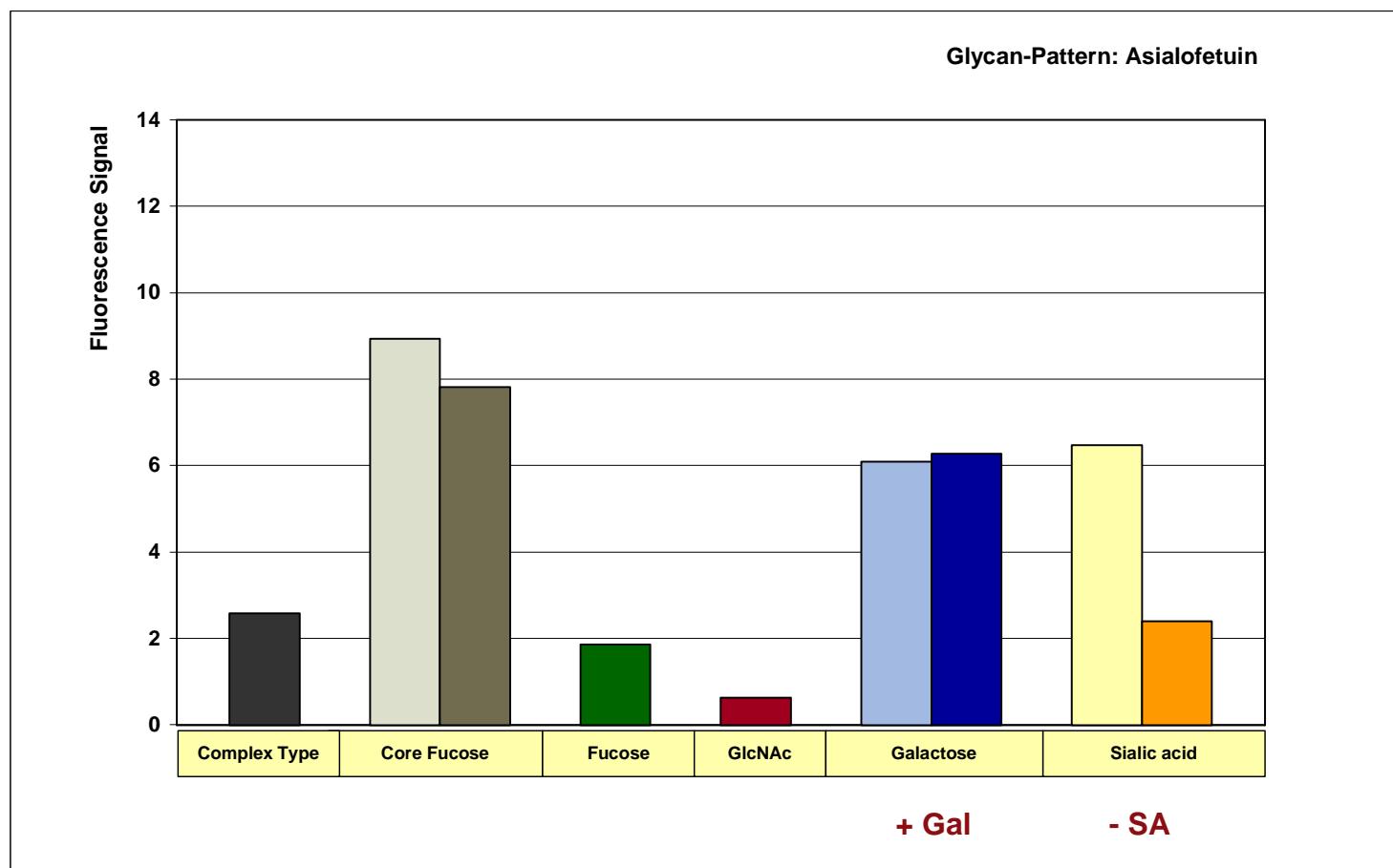
Competitive Assay

- Analyte inhibits lectin binding to glycan surface
- Inhibition at low sample concentration shows high affinity to lectin

Application: Glycan pattern of Fetuin

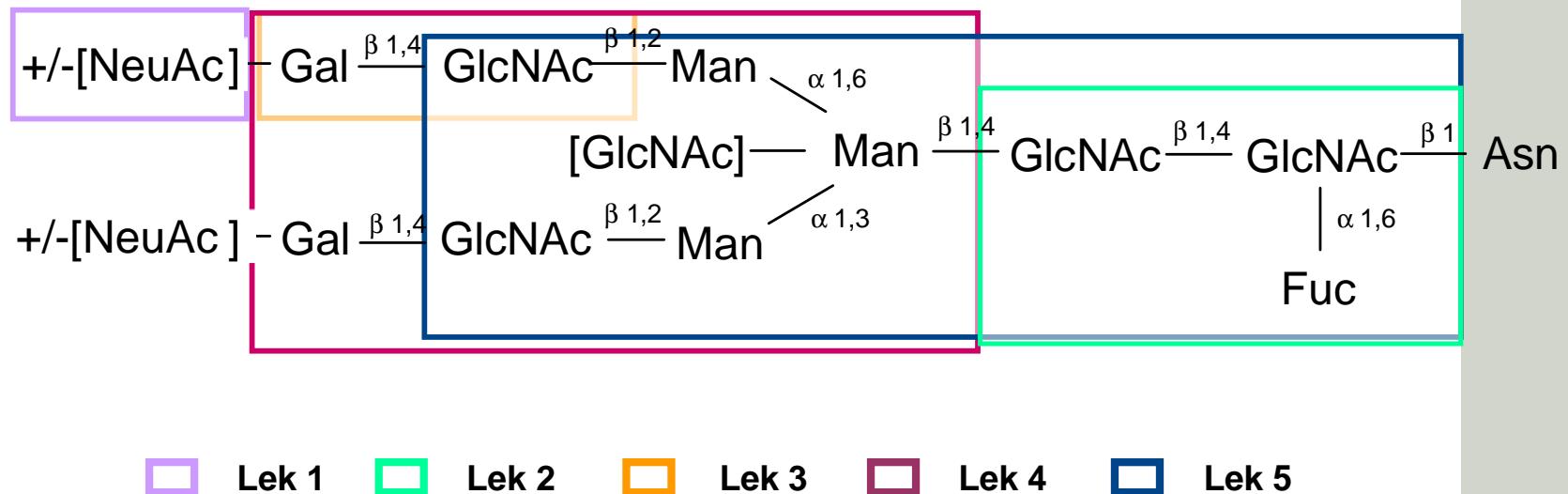


Application: Glycan pattern of Asialofetuin

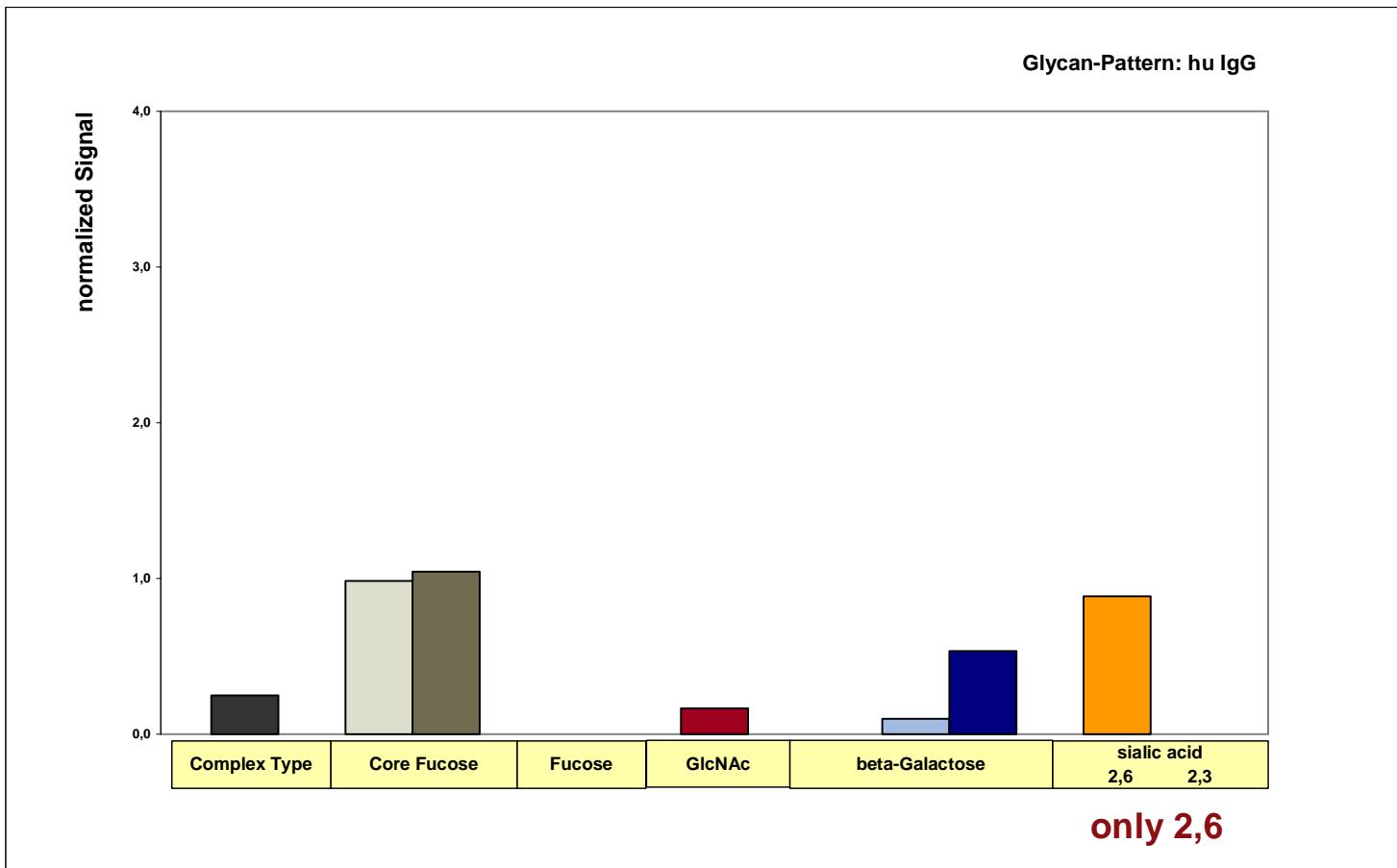


Application: therapeutic Antibodies

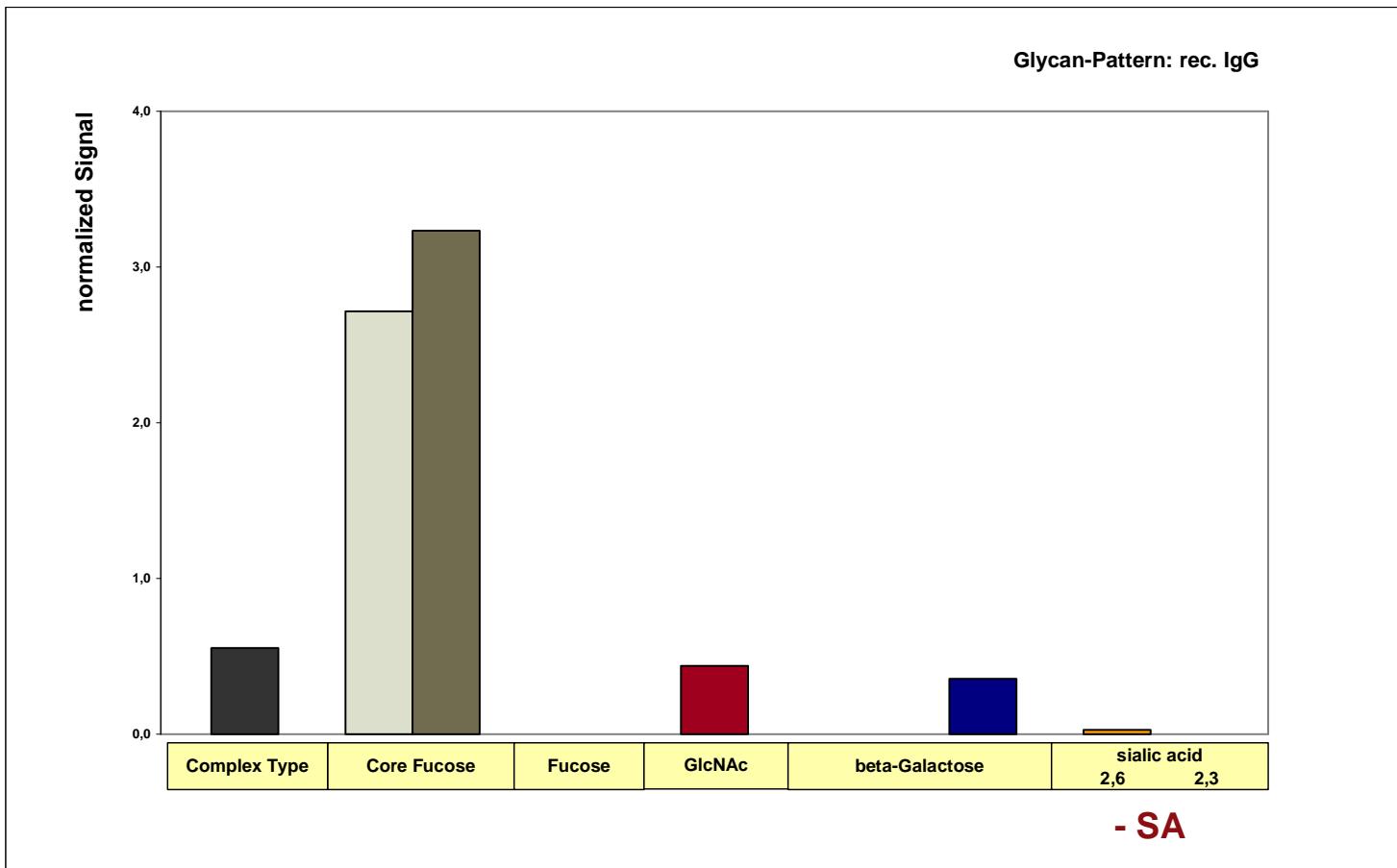
Glycosylation of human IgG



Application: IgG from human serum



Application: recombinant Antibody





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Application: Milk and milk products

BioChance PLUS Project:

„Innovative Methods for Analysis and Isolation of Bioactive Glycoconjugates from milk for the development of prebiotic foods“

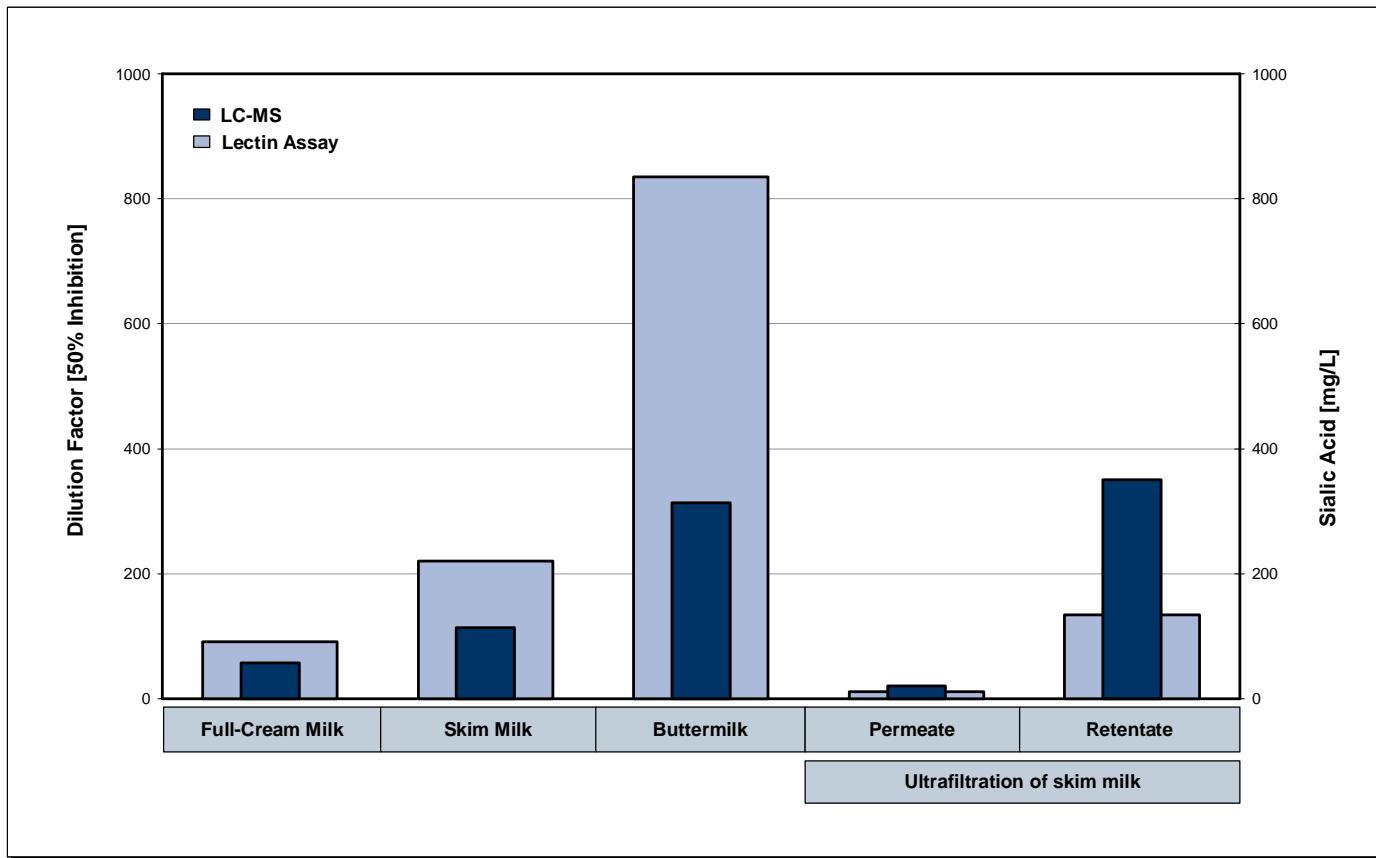


Universität Bremer

Aim:

- Development of assay platform
- Process development for milk fractionation

Application: Sialylated OS and glycoproteins in processed milk (competitive assay)





Summary

- **Lectin based microplate assays** facilitate fast and reproducible glycan analysis
- Suitable for intact glycoproteins and complex biological samples
- **Application therapeutic Antibodies:** different glycoprofiles of human and recombinant IgG
- **Application milk:** determination of sialylated glycoconjugates in milk fractions; good correlation of assay data with LC-MS data

