

Title: Development of Carbohydrate-based Mimics as Ligands for Siglec-8

(MSc Pharmazie)

Project description: The research project involves the design, chemical synthesis and *in vitro* evaluation of novel disaccharide mimics as potential high-affinity binders for the lectin Siglec-8. The protein, a member of the CD33-related Siglec family, is exclusively expressed on eosinophils and mast cells, which play a key role in the pathophysiology of asthma. Targeting Siglec-8 with antibodies or glycan ligands was shown to result in apoptosis of eosinophils and inhibition of mast cells degranulation, suggesting Siglec-8 as a promising new pharmacological target for the treatment of long-term inflammatory asthma and other eosinophil or mast cells related disorders.

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