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Master thesis work will be for spring 2020. Deadline for application is 15<sup>th</sup> November 2019.

### **Master thesis - Design, purification and functional testing of protein ligands used for purification of glycoproteins**

Protein glycosylation is one of the most prevalent posttranslational modification (PTM) and is critical in regulating biological activity. Most extracellular eukaryotic proteins (including antibodies and membrane proteins) are glycosylated and carbohydrate binding ligands are hence attractive for purification application purposes. Several carbohydrate binding proteins (e.g. Lectins) are available for purification of glycoproteins, for example Concanavalin A (ConA). However, ConA-based products suffer from undesired leaching during purification that may contaminate the target glycoprotein eluate. Other carbohydrate binding proteins represent distinct specificities for additional or similar types of sugar moieties and may be suitable as an alternative strategy to ConA-based applications.

#### **Project:**

The aim of this thesis is to evaluate carbohydrate binding proteins and their suitability in glycoprotein purification.

Methods used will be molecular biology, cultivation of *E. coli*, expression and purification of proteins and protein analysis.

The project requires good basic knowledge in molecular biology and chromatography, ability to work independently and good collaboration skills.

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