



## Master thesis project

# Optimization of a polysaccharide based system for a triggered release of chemical substances in presence of digestive enzymes

## Background

YKI, Institute for Surface Chemistry is the internationally leading industrial research institute in applied surface and colloid chemistry. Our mission is to transfer and develop innovations to customers in industrial sectors where surface chemistry plays an important role.

This project is part of CODIRECT, which aims at developing novel and inventive high performance vehicles for controlled delivery and release of active substances, for example in food and pharmaceutical applications.

## Project description

The project involves a characterisation of a performance and a further development of a polysaccharides based system designed for a release of active substances at a desired position along a human digestive system. Further development of a system will be aimed on control of the release rate in the presence of enzymes and on minimising of a spontaneous release in absence of the enzymatic trigger.

The student will have an access the research facilities of both YKI and at Royal Institute of technology (KTH) to combine basic science with application driven research. This degree project is covering 30 credits, the equivalent of 20 weeks of full time study. Student of chemistry program with specialization in biomolecular technology, pharmaceutical technology or polymer technology are welcome to apply.

The project starts in August 2010.

**CODIRECT** is an Institute Excellence Centre hosted by YKI, the Institute for Surface Chemistry. The aim of CODIRECT is to create a Centre of Excellence within the strategic area of controlled delivery and release, recognized for both scientific excellence and industrial importance. The Centre provides a forum where industry and academia join the institute to tackle fundamental issues and specific industrial problems within the controlled delivery and release field. CODIRECT is sponsored by the Swedish funding agencies VINNOVA, Knowledge Foundation and Swedish Foundation for Strategic research as well as international industries such as Kraft Foods, AkzoNobel, Colgate-Palmolive and Procter & Gamble.

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