Chair of Bioseparation Engineering
TUM School of Engineering and Design
Technical University of Munich

BioSE

Semester's thesis/HiWi

Fermentation/Analytical method Development

Keywords: Basidiomycetes fermentation | HPLC | β-Glucan

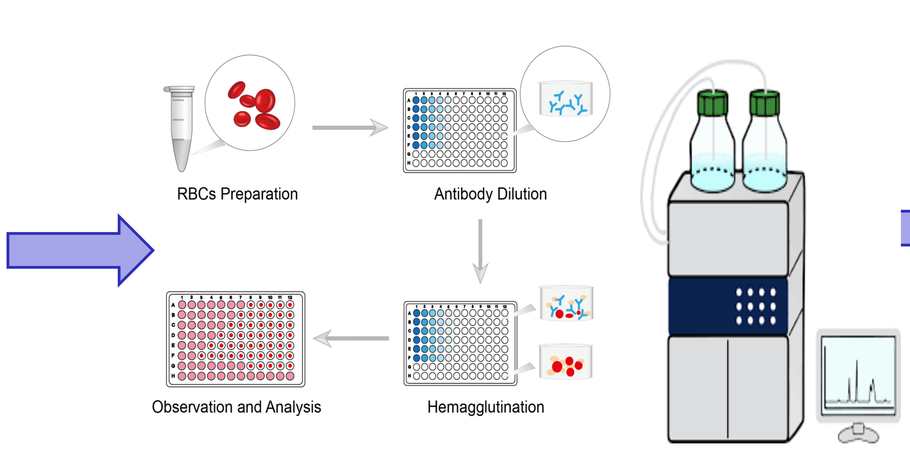
Project Description

Filamentous fungi in particularly basidiomycetes or wood rotting fungi are beneficial to humankind as they have a lot of biomolecules such as protein, polysaccharides which have different applications in food, the cosmetic industry and so on. The project aims to ferment these fungi sustainably, with a later focus on extracting and separating these biomolecules using novel and conventional methods

The focus of my project is on particularly lectins(protein) and β-glucans(polysaccharides) to extract and separate them from fungi using efficient downstream units such as (fractionation and chromatographic methods.

This work will involve fermentation of basidiomycetes and developing analytical method for the polysaccharide and protein

Fermentation



Analytical method

Downstream

Task

1. Optimisation of reproducible fermentation process for fungi
2. Development of analytical methods: HPLC, Hemagglutination assay, SDS Page

Profile

- Structured and independent work
- Lab experience required
- Bachelor/Master student in biotechnology (IBT, MBT), biochemistry, biology, chemistry microbiology, or similar
- **Start date**: as soon as possible
- Language: English

Bhagyeshri Ulhas Mantri | b.mantri@tum.de | Chair of Bioseparation Engineering | Room MW2404