Technische Universität München – TUM School of Engineering – Bioseparation Engineering Group

Bachelor's / Master's / Semester Thesis

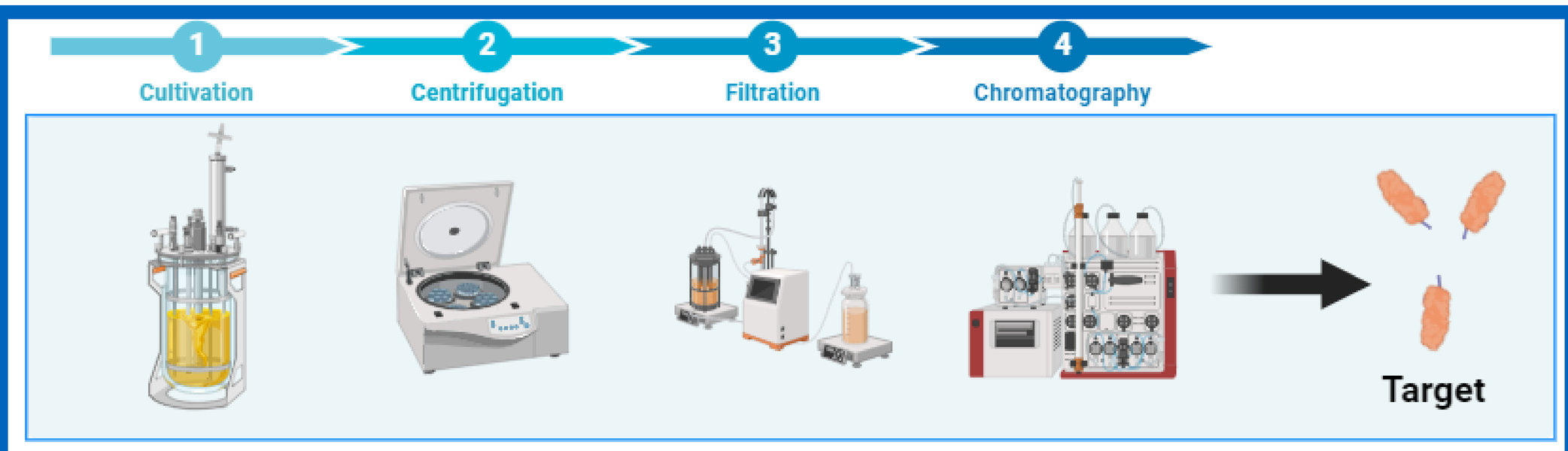
Evaluation of Biotechnological Processes using SuperPro Designer

Keywords: Protein Production - Simulation – SuperPro Designer – Dynamic Crossflow – Process Intensification

Project Description

In this research project, genetically optimized *E. coli* strains expressing different extracellular high-value proteins will be used to establish different concepts of process intensification. Process intensification in the biopharmaceutical industry aims for the improvement of productivity and flexibility while simultaneously decreasing cost and process footprint. This can be realized through establishing and applying innovative equipment, methods, and modes during the development of integrated upstream and downstream processes.

Focus of this thesis, is the **modeling, evaluation and optimization** of the developed process using the industry standard software **SuperPro Designer**. Therefore, the experimentally obtained data need to be added to the software and checked for consistency, following a cost evaluation and further process relevant evaluations.



Your Tasks

- Set-Up of SuperPro Designer
- Implementation of experimental data
- Set-Up of the process flow chart
- Evaluation of process data
- Cost evaluation

Your Profile

- Independent and structured way of working
- Experience with SuperPro Designer would be beneficial

Contact

Start: From now

Language: German/English

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