

Applicants for student projects in the field of fermentation and cell factory designing

Will it excite you to pursue a project in a small biotech company focusing on sustainable production of biochemicals and do you want to gain hands-on experience in state-of-the-art scientific tools?

About the project

Our typical projects within strain and protein engineering follow the design-build-test-learn cycle, allowing you to obtain and hone your skills within molecular biology, fermentation, and data analysis. Projects within method development are also available, where you can help develop new synthetic biology tools to assist other researchers in strain engineering and strain screening. We also offer fermentation internships to interested students from the Fermentation based Biomanufacturing study line. It is possible for students to show their interest in multiple options such as metabolic engineering, fermentation optimization, protein engineering, downstream purification, biocatalysis, and bioinformatics.

Your ideal profile

- 🟡 You are pursuing a master's degree in biotechnology or life science.
- 🟡 You have a firm grasp on molecular biology, e.g., and understanding of the central dogma, polymerase chain reactions and plasmid function/structure.
- 🟡 If you are applying for project under metabolic or protein engineering, you have knowledge and preferably experience with various cloning techniques, such as USER cloning, Gibson assembly and restriction/ligation cloning.
- 🟡 As a protein engineer, you understand the relation between structure and function of enzymes.
- 🟡 You understand the concepts of metabolic engineering, e.g., flux analysis and cofactor balancing.
- 🟡 Knowledge about different fermentation processes is desirable.
- 🟡 You are a team player and attentive to details.
- 🟡 You are fluent in English both spoken and written.

General project workflow

Step 1: Molecular biology



Skills acquired:

- State of the art genome editing tools and cloning methods
- Design and generation of genetic libraries
- Standard molecular biology approaches (PCR, plasmid purification etc.)

Step 2: Screening



- Development and application of high-throughput screening assays
- Development and application of enzymatic and biocatalytic assays
- Learn advanced and high throughput HPLC analysis methods

Step 3: Fermentation



- Hands on experience with lab scale fed-batch fermentation (1L)
- Relate biological results to process data

How to apply

Please fill the questionnaire on our website via this [online form](#).

Your application must contain a single PDF with files combined in this particular order: Motivated application, your resume, your bachelor's and master's grades, list of reference(s) and recommendation letter(s) if available. Maximum size for the PDF is 5MB.

Applications will be evaluated as they are received.

Contact

If you have any questions about the position, please contact Kasper Stadel Nielsen KSN@cysbio.com.

Allowances

We do not offer allowances for students living in the Copenhagen area. We offer one thousand €/month as a relocation allowance for international students. We do not sponsor visas.

About Cysbio

Cysbio is a biotechnology company that designs and constructs microbial cell factories for industrial production of biochemicals using fermentation and biocatalysis. Depending on the product, our research either focuses on optimizing metabolic flux towards the product, or towards optimizing expression of the biosynthetic genes. To do so we use modern synthetic biology methods to construct and evaluate plasmid-based production systems or to carry out editing of the bacterial genome. We have a good history of hosting student projects, either in the form of special courses for Master students, or in the form of master's thesis projects. We offer a selection of projects which can be tailored within the fields of protein engineering and strain engineering.

Read more on: www.cysbio.com.

