

CALL FOR APPLICATIONS: MASTER THESIS

The Chair of Werner Siemens for Synthetic Biotechnology at the Department of Chemistry at the Technical University of Munich in Garching has an opening for a Master's Thesis position

Screening and characterization of (marine) Bacteria for Biosurfactant production and their biotechnological applications.

During cultivation, bacteria secrete secondary metabolites to process substances for nutritional uptake to increase biomass. Methods will be developed for the efficient screening of biosurfactant production with the aim to develop high-throughput assays. Within our large microbial library strains will be screened with the validated methods. Their product spectrum will be analyzed in a qualitative and quantitative manner. Further, the compounds will be evaluated for biotechnological application.

Responsibility and Tasks:

- Cultivation of microbial strains (Bacteria, fungi, S1) for biosurfactant production
- Development of screening methods for biosurfactants
- Characterization and quantification of compounds
- Analysis of compounds in qualitative and quantitative assays
- Optional: Optimization of growth conditions, media and assays
- Optional: Development of high-throughput assays based on the validated methods

Requirements:

Suitable candidates should have strong background biochemistry operations, as well as sufficient experience in microbiology. Suitable candidates have a Bachelor in biochemistry, biotechnology or equivalent fields. High team spirit and communication skills, and a high level of self motivation are key to accomplish the set tasks. Previous experience is an advantage. An research internship prior to the Master Thesis is possible as well. Please note that email applications should reference EcoWash in the Subject.

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