JÜLICH
Forschungszentrum

Conducting research for a changing society: This is what drives us at Forschungszentrum Jülich. As a member of the Helmholtz Association, we aim to tackle the grand societal challenges of our time and conduct research into the possibilities of a digitized society, a climate-friendly energy system, and a resource-efficient economy. Work together with around 7,500 employees in one of Europe's biggest research centres and help us to shape change!

Our Institute of Bio- and Geosciences - Biotechnology (IBG-1) is a leader in bioprocess development in the field of industrial biotechnology. Our Bioprocesses and Bioanalytics working group has extensive expertise in the development of microbial bioprocesses and strain engineering using tools and workflows for laboratory automation, miniaturization and digitalization. Our research focuses on innovative approaches to targeted screening of strain libraries and bioprocess development. Modern bioprocess optimization benefits dramatically from high throughput technologies to screen large strain libraries or cultivation conditions. To automate this screening process, an automation platform is currently set up in the Institute. One part of this automation platform is a Growth Profiler device (Enzyscreen) which allows for the cultivation of 10 x 96 cultures in parallel. This high throughput will pave the way for machine learning techniques in bioprocess development. Ready to push the boundaries of biotech? Apply now!

To establish the Growth Profiler with first biological applications, we offer an interesting

Bachelor- / Master Thesis or Research Internship – E. coli Protein Production in Automated Laboratory Environment

Your Job:

- Literature research on media optimizations for E. coli
- General calibration of Growth Profiler
- Establishment of Fluorescence Assay for in vivo protein immobilization quantification
- Sensitivity analysis of expression efficiency dependent on medium composition
- Media optimization for optimal in vivo immobilized protein expression
- Process parameter analysis (Substrate, pH, induction)

Your Profile:

The job will be advertised until the position has been successfully filled. You should therefore submit your application as soon as possible. We look forward to receiving your application via our **Online-Recruitment-System!**

Questions about the vacancy?
Get in touch with us by using **our contact form.**
Please note that for technical reasons we cannot accept applications via email.
www.fz-juelich.de

- Ongoing studies of Biology, Biotechnology or associated fields
- High motivation with proactive ideas
- Hands-on experience in microbial cultivation and sterile work
- Knowledge / experience with Design of Experiments, UV-VIS spectral analysis is an asset but no prerequisite
- Interest in robotic automation, no prior knowledge necessary
- Basic Python skills or motivation to learn

Our Offer:
We work on the very latest issues that impact our society and are offering you the chance to actively help in shaping the change! We support you in your work with:

- Hands-on training with modern newly established laboratory automation equipment
- Close supervision by experienced scientists with step by step introduction
- Ideal conditions for gaining practical experience during your studies
- Interdisciplinary collaboration and an international and collegial team environment

In addition to exciting tasks and a collegial working environment, we offer you much more: https://go.fzj.de/benefits

We welcome applications from people with diverse backgrounds, e.g. in terms of age, gender, disability, sexual orientation / identity, and social, ethnic and religious origin. A diverse and inclusive working environment with equal opportunities in which everyone can realize their potential is important to us.

Further information on diversity and equal opportunities: https://go.fzj.de/equality