

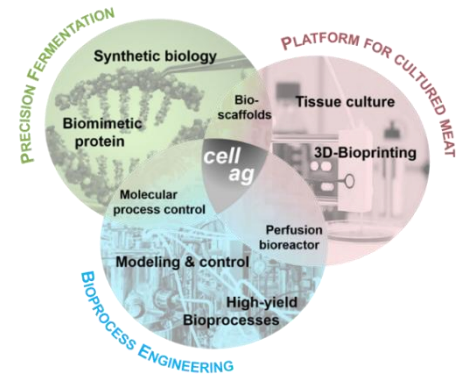
We award from Aug/Sept 2025 on

Research internship (with the option of a Master's thesis)

RNA thermometer (RNAT) as a process control element for ovalbumin
in precision fermentation

About us

The professorship for Cellular Agriculture (Prof. Dr.-Ing. Marius Henkel) was established in September 2022. The focus is on the development of biotechnological processes and concepts for the alternative production of agricultural products. In particular, this addresses problems and challenges in connection with the environmental impact, animal welfare and sustainability aspects of conventional animal husbandry for meat production.



Tasks

- Diving into the world of RNA thermometers (doi: 10.1111/j.1574-6976.2005.004.x, 10.1016/j.molcel.2009.12.032, 10.1016/j.molcel.2009.11.033)
- Animal proteins from precision fermentation (doi: 10.1080/00963402.2017.1413059, 10.1016/j.jmb.2023.168191, 10.1016/j.pep.2015.09.015)
- Experimental design: cloning methods, plasmid design *in silico*, shake flask and bioreactor cultivation, data evaluation
- Cloning of the expression system *in vivo* (*E. coli*)
- Testing of the expression system as cultivation in shake flasks and bioreactor
- Analyses: protein quantification, process parameters, yields, ...
- Objective: Comparison of the developed expression system with established induced expression system

Requirements

- You have an independent, structured and reliable way of working
- You are open and communicative
- You already have experience in molecular biology
- You are familiar with experimental design, cloning methods, and procedures (plasmid & primer design, sequencing, ...)
- You are experienced in practical laboratory work
- You have very good English skills (written and spoken)

We offer

- the opportunity to gain insights into the field of precision fermentation
- the possibility to work on novel, demanding research topics
- a nicely equipped lab as a working space
- an appreciative and cooperative working environment

We look forward to receiving your detailed application. Please send them by e-mail to christina.peternell@tum.de

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