

PostDoc (f/m/d) for protein engineering: focus on development of genetically encoded sensors

The **research group for Cell Engineering** is one of 11 inter-disciplinary laboratories at the **Chair of Biological Imaging (CBI) at the Technical University of Munich (TUM)** and focuses on developing genetically encodable molecular labels and sensors for innovative imaging schemes primarily fluorescence and optoacoustic imaging. We use protein engineering to develop labels based on our research in photophysics and structure-function relationships. These labels are employed on the level of single mammalian cells as well as whole organisms. We also work on specialized screening, spectroscopy and imaging instrumentation to complement our molecular tools.

We are looking for a highly qualified and motivated **PostDoc (f/m/d) for protein engineering: focus on development of genetically encoded sensors**.

Genetically encoded sensors are a major tool to unravel the functioning of life on the cellular level. We are developing dedicated genetically encoded sensors for optoacoustics measurements. The candidate will focus on engineering chimeric proteins that show a small-molecule binding dependent change of photophysics. The candidate will further explore and exploit their intricate and exciting mechanisms and driving such proteins towards a use in life-science imaging applications. The projects will be very diverse and include methods from protein-engineering and high-throughput screening over photo-physical and structural characterization to mammalian cell culture and eventual *in vivo* application. The work will be conducted in close collaboration with other laboratories of TUM and the Helmholtz Zentrum Muenchen (HZM) that are leading in the respective research areas, e.g. *in vivo* application or protein structure elucidation. Hence, the position is an exciting interface between protein-engineering, basic photophysical research, development of molecular tools as well as imaging.

Qualification:

The successful applicant must have the following:

- High motivation, curiosity, and commitment to scientific excellence
- PhD Degree in Chemistry, Physics, Biochemistry or similar field
- Background in chromophores, photophysics, photochemistry
- Experience in protein engineering
- Experience in high-throughput screening
- Interest in excited state photophysics, and photoisomerization processes will be appreciated as well as understanding of (protein-) environmental effects on the photophysical properties of chromophores
- Interest in optical spectroscopy techniques
- Interest in imaging
- Team player skills and enthusiasm to work in a multi-disciplinary, collaborative environment
- Excellent command of the English language

Our offer:

The successful applicant will have a 2-year contract. We offer a competitive salary and benefits depending on work experience and seniority in accordance with the public service wage agreement

of the Free State of Bavaria (100% TV-L E13 as an equal opportunity and affirmative action employer, TUM explicitly encourages applications from women as well as from all others who would bring additional diversity dimensions to the university's research and teaching strategies.

Your application:

We are looking forward to receiving your comprehensive application including your letter of motivation, CV and academic transcripts of records preferably in English and in a single PDF file, via email to cbi.recruitment@tum.de. Please indicate "PostDoc for protein engineering: focus on development of genetically encoded sensors" in the subject line.

For any questions please contact:

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Links:

<https://web.med.tum.de/cbi/research-labs/cellengineering/>

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