

PhD Position in molecular biology focusing on regulated mRNA translation, tRNA biology, and immune regulation

Location: Ludwig-Maximilians-University Munich, Gene Center, Bohlen Group, Munich Großhadern, Germany.

Web: <https://www.genzentrum.uni-muenchen.de/research-groups/bohlen/index.html>

The AG Bohlen at the Gene Center of LMU Munich is a research group in molecular biology focusing on regulated mRNA translation, tRNA biology, and immune regulation. We explore how translational control shapes cellular responses in development, disease, and immunity, using cutting-edge molecular, biochemical, and cellular immunology techniques. Our lab fosters an intellectually rigorous, collaborative, and inclusive research culture.

As a PhD candidate, you will:

- Design and execute molecular biology experiments to dissect mechanisms of regulated mRNA translation (e.g., ribosome profiling, reporter assays, ribonucleoprotein complex analysis).
- Investigate tRNA biology mechanisms (biogenesis, modification, function) using state-of-the-art methods.
- Study the interplay between translation control and immune signalling in relevant cell models.
- Analyze and interpret high-throughput and quantitative data.
- Present findings at internal group meetings and national/international conferences.
- Contribute to writing manuscripts and grant proposals.
- Supervise bachelor/master students on short research projects.

We are looking for a candidate who:

- Holds an excellent master's degree (M.Sc./equivalent) in molecular biology, biochemistry, immunology, genetics, or a related field.
- Has hands-on experience in molecular cloning, cell culture, RNA-based assays, and ideally translation or tRNA methodologies.
- Ideally possesses immunology techniques (e.g., flow cytometry, ELISA, functional assays).
- Demonstrates strong analytical thinking, critical rigor, and motivation to push scientific frontiers.
- Is fluent in English (spoken and written); German is an advantage but not required.
- Has excellent communication skills and a teamwork mindset.
- Has ambitious career aspirations in academic research or biotech/pharma.

What we offer

- A stimulating, supportive, and multidisciplinary research environment in one of Europe's top molecular biology centers.
- Structured PhD training through the LMU Graduate School and Gene Center seminars.
- Access to cutting-edge core facilities (omics, microscopy, FACS, proteomics).
- Collaborative opportunities with internal and external partners (e.g. Max Planck Institute, DFG-funded networks).
- Competitive remuneration (65 % TV-L E13) and social benefits, including parental leave and pension schemes.
- Access to LMU's international network and German life-science funding landscape.

This position is part of the Graduate School Quantitative and Molecular Biosciences Munich

The Graduate School prepares young life scientists for the emerging era of quantitative, systems-oriented bioscience. Its innovative, international PhD program bridges traditionally separate disciplines—ranging from biochemistry and medicine to bioinformatics, experimental and theoretical biophysics, and applied mathematics. While maintaining a strong foundation in their primary discipline, QMB students gain expertise in multiple approaches, learn to think across fields, and develop the ability to communicate and collaborate effectively with scientists from diverse backgrounds.

Key components of the QMB program include:

- An interdisciplinary research project
- A structured program of coursework
- Professional skills training

Requirements

Applicants must hold a completed Master's degree (or equivalent) in a relevant field before starting the PhD. Full details of our requirements are available here:

<https://qbm.genzentrum.lmu.de/application/requirements/>

Applications must be submitted in English via our online tool:

<https://www.portal.graduatecenter.uni-muenchen.de/ocgc/qmb>

Timeline

- Application opens: August 21, 2025
- Application deadline: October 6, 2025
- Reference deadline: October 14, 2025
- Interviews: scheduled individually
- Notification of results: December 2025

For questions, please contact: office-qbm@genzentrum.lmu.de

QMB is a joint initiative of leading scientists from Ludwig-Maximilians-University Munich, the Technical University of Munich, the Max Planck Institute of Biochemistry, and Helmholtz Center Munich. Employment contracts are issued either by Ludwig-Maximilians-University Munich or one of the partner institutions.