

PhD Project in CAR T Cell Therapy vs Acute Myeloid Leukemia

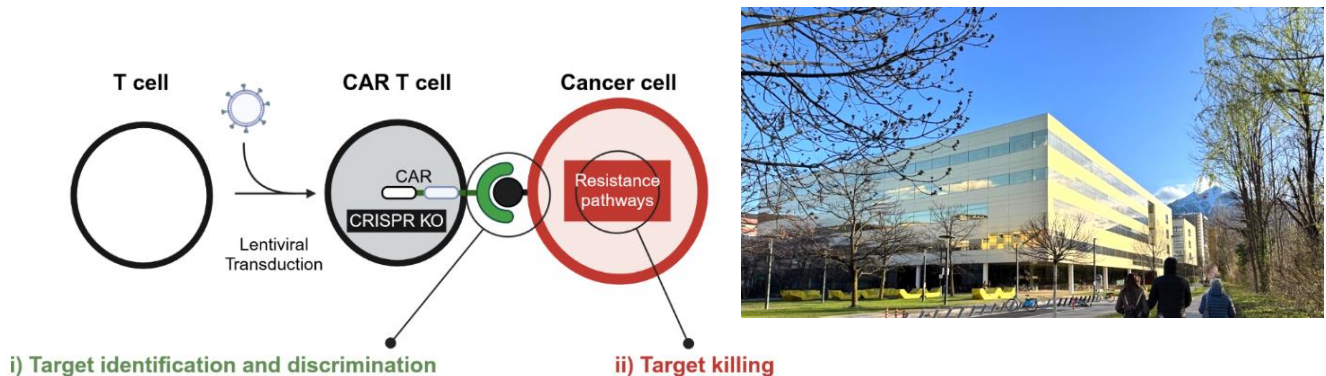
Mueller lab

Location: Medical University Innsbruck, Biocenter Innsbruck, Institute of Molecular Biochemistry, Innsbruck, Austria

Start Date: Summer 2025

Duration: 4 years (full-time)

We are looking for a highly motivated and curious PhD candidate to join our research team working on CAR T cell therapy against acute myeloid leukemia (AML). Our group focuses on next-generation immunotherapies for hematological malignancies, with a strong emphasis on a better understanding of underlying cell biological processes.



Project Overview

This PhD project aims to improve efficacy of adoptive cell transfer against AML, a disease known for its heterogeneity and resistance to current treatments. You will build on our knowledge on resistance mechanisms of leukemic blasts to CAR T cell therapies and apply and develop novel pooled CRISPR and barcoding-based screening strategies to:

- Identify determinants of immune effector cell function and dysfunction
- Uncover resistance pathways limiting CAR T cell activity in AML
- Optimize CAR designs through high-throughput functional screening

The project is embedded in a larger collaborative effort exploring aspects as i) target cell identification and ii) target cell killing as prerequisites for an effective CAR T cell therapy against AML and combining immunology, molecular biology, bioinformatics, and synthetic biology.

Your Profile

- Master's degree (or equivalent) in Immunology, Cell Biology, Molecular Biology, or related fields
- Background or strong interest in cancer immunotherapy and hematologic malignancies
- Hands-on experience with cell culture, flow cytometry, lentiviral transduction, sequencing and/or CRISPR technologies is a plus
- Interest or experience in large-scale pooled screenings or data analysis
- Team-oriented mindset, critical thinking skills, and scientific curiosity
- Fluency in English (spoken and written)

We Offer

- A dynamic, interdisciplinary research environment in a vibrant university city with exceptional quality of life
- Access to state-of-the-art platforms, core facilities, and clinical samples from a large tertiary teaching hospital
- Close mentorship and structured PhD supervision
- Opportunities to present at national and international conferences
- Competitive PhD salary in accordance with national guidelines
- Participation in graduate training programs and scientific workshops

How to Apply

Please send your application as a single PDF including:

- A cover letter detailing your research interests and motivation
- CV including academic record and contact details of two referees

Send your application to: phdcartccb@gmail.com