

UNSER TEAM BRAUCHT SIE!

The research group of Dr. Kristina Maas-Bauer, Centre for Translational Cell Research (ZTZ) at the Medical Center – University of Freiburg, Department of Hematology, Oncology and Stem Cell Transplantation, invites applications from

Medical Students (m/f/d)

Starting date: as soon as possible

PROJECT: Generation of off-the-shelf CD19 CAR- invariant natural killer T cells for treatment of hematologic malignancies and auto-immune diseases

This project is led by Dr. Kristina Maas-Bauer in close collaboration with Prof. Dr. Robert Zeiser. CAR-T cells have revolutionized the treatment of B-cell malignancies and represent a promising treatment option for patients with B-cell-driven autoimmune disease. To date, available products are manufactured autologously, which can be challenging in heavily pretreated patients. Invariant natural killer T (iNKT) cells express a semi-invariant TCR that recognizes glycolipids presented in the context of the CD1d molecule. Owing to this TCR composition and antigen recognition, iNKT cells do not induce graft-versus-host disease, positioning them as an ideal platform for the development of off-the-shelf cellular therapies.

In this project, we will generate CD19 CAR-iNKT cells using an established protocol, which we will further optimize for maximal transduction efficiency and expansion. We will then perform in vitro cytotoxicity assays against samples from patients with autoimmune and neurologic diseases as well as B-cell malignancies. Once established, we will extend the platform to murine CAR-iNKT cells and evaluate their efficacy both in vitro and in murine models.

Our goal is to establish off-the-shelf CAR-iNKT cells for potential clinical application.

Tasks:

- Isolation and culture of human PBMCs and lymphoma cell lines
- Optimization of CAR-iNKT cell protocol
- Co-culture assays
- Flow cytometry

Applications should include:

- Motivation letter
- CV
- Relevant academic transcripts or certificates
- Optional: Letter of recommendation

Please send applications to

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For further inquiries please contact:

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