Master Thesis offered

The T lymphocyte landscape during breast cancer immunotherapy and other disease conditions.

We here offer an interesting immunogenetics project that will be carried out in close collaboration with the Institute for Immunology at UKSH/CAU. At the institute, we currently analyse the behaviour of specific T lymphocytes in health and a variety of diseases (e.g. inflammatory bowel diseases, infections, cancer). To this end, we have established a variety of cutting-edge technologies utilizing next generation sequencing (NGS) which allow us to deeply profile the T lymphocyte landscape both in blood and other tissues, both at bulk and single-cell level. Our work, which has the goal to better understand disease origin and progression, also helps to identify new diagnostic and prognostic disease biomarkers. Our activities are located at the interface between the lab and bioinformatics.

Here, we will analyze the changes in T lymphocytes in the blood of breast cancer patients over a period of 6 months when they undergo chemotherapy and immunotherapy treatments. We aim at identifying specific T cells relevant for therapy response and non-response. These clonotypes may have the potential to be used as prognostic biomarkers for breast cancer. The candidate will also help to further establish new methodologies for T cell analysis at single-cell level.

If you are interested in immunology, in learning NGS data analysis and improving your coding skills (particularly R) but also in establishment of new lab methodologies, send your application and your CV. Excellent candidates may also apply for financial support (Hiwi contract offered).

If you have any question, feel free to send an email to Elisa Rosati (e.rosati@ikmb.uni-kiel.de) or Prof. Andre Franke (a.franke@ikmb.uni-kiel.de).

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