

Did you know that parasites have evolved smart ways to overcome complement mediated killing by acquiring regulators, expressing proteases or development of parasite-encoded proteins specifically targeting different complement components, to inhibit the complement system at different stages?

Therefore, some of the parasitic tricks are good ideas/lead structures for the generation of novel immune modulators!

We are looking for a motivated master student to further investigate the development of parasite derived inhibitors. In this project you will learn how to produce recombinant proteins, therefore you will use common molecular biology techniques like:

- Gene cloning (PCR, DNA restriction, forming new plasmids by ligation and use of DNA electrophoresis)
- Transformation of recombinant plasmids into E. coli
- Protein expression, protein purification (with Fast Protein Liquid Chromatography FPLC) and protein characterization (SDS-PAGE, Western Blot, nanoDSF, etc.)
- The characterization will also include the testing of the recombinant proteins in different Chromogenic Substrate, ELISAs and Haemolytic Assays.
- Kinetic studies with Surface Plasmon Resonance (SPR) and Biolayer Interferometry (BLI).

Further information can be provided upon request.