Collaborations within the DK

K. Gruber

expertise in molecular modeling and docking, collaboration in the design of small molecule probes.

P. Macheroux

His expertise in enzyme kinetics and mechanisms will be essential for our continuing collaboration in the investigation of DPP3 and for the new project related to phenazine biosynthesis.

M. Oberer

Her focus on structural biology of the enzymes of the lipolytic pathway will be very valuable in the design and understanding of inhibitors of these enzymes.

R. Zechner and R. Zimmermann

These two groups at the KFUG are leading experts in the molecular enzymology and pathology of lipolytic enzymes. Our collaboration will continue to study inhibitors of model activities in vitro and in vivo.

E. Zechner and S. Schild

The expertise of these two groups at the KFUG is very important for our planned studies to investigate the impact of inhibitors of phenazine biosynthesis on the virulence and growth of pathogenic bacteria.

Collaborating research groups where PhD Students could perform their research stay abroad

W. Blankenfeldt

The Blankenfeldt lab (Univ. of Bayreuth) is our longstanding collaboration partner in the investigation of phenazine biosynthesis, who also has hosted and trained two of my students in expressing proteins, performing enzyme assays and growing crystals. He is an expert in protein crystallography, which he used (in addition to other analytical techniques like HPLC-coupled NMR spectroscopy and mass spectrometry) to unravel the function of key enzymes in phenazine biosynthesis. These studies will be aided by ligands and mechanistic probes synthesized in our laboratory. Enzymes from *Pseudomonas* and *Burkholderia* will be compared to understand why these species produce different phenazines. The structures of key phenazine-modifying enzymes will be determined to exploit them for the synthesis of potential inhibitors