



Tobias LINDER



Finishing year: 2014

Supervisor: Anna Weinzinger,
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Thesis title: Pore gating of
potassium channels and its
relevance for drug effects.

Current Employer: Self-
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How would you summarize your thesis results in 3 sentences?

My thesis provided novel insights into K⁺ channel specific movements on amino acid level of the opening and closing behavior of these channels which is crucial for ion conduction and the importance of these movements to drug binding. In all studied K⁺ channels, the prototypical bacterial K⁺ channel KcsA, the bacterial inward rectifier K⁺ channel KirBac1.1, and the human Kv channel hERG, aromatic amino acids were found to play crucial roles in gating by unlocking channels from a specific state (F114 in KcsA), by forming the pore gate (F146 in KirBac1.1) and by shaping the drug binding site (Y652 and F656 in hERG). Specifically, studies on the hERG channel disclosed the important role of F656 for drug trapping which is characterized by the drug's retention in its binding site upon channel closure.

What was the impact of the MolTag program on your further career?

It affected to a high degree the way of how I pursue my goals and **always reminds me to keep an open mind.**

What did you particularly like about the MolTag program?

The opportunity to get insights into different research areas and to **discuss research questions from different perspectives** with scientists from all around the world. Also the possibility of research stays in Germany and the USA was great.

