

A SUMMER IN REGENSBURG: THE ZIEGLER LAB

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There is nothing quite like a summer research internship abroad in the lovely city of Regensburg, Germany. A small town in the state of Bavaria, Regensburg had much to offer in terms of its medieval architecture, wonderful food (my personal favorite were the Döners), and riverside views. Additionally, Regensburg is in proximity to large cities including Munich and Stuttgart, which offered nearby museums and historical landmarks to visit during the weekends.

Speaking of traveling, the southern location of Regensburg made getting to other European cities very accessible. During my stay, I spent most weekends exploring the nearby cities of Prague, Budapest, Salzburg, Rome, Naples, Brno, and Bratislava. I must say that one of the most valuable aspects of the whole internship was the ability to explore new areas while gaining a deep understanding of different cultures. Although traveling was a highlight of my trip, I also enjoyed having a few weekends to stay back and explore the city of Regensburg itself, especially after a busy week in the lab.

The laboratory I worked in was the Christine Ziegler Lab of Biophysics. This lab focuses mainly on the structural determination of membrane transport proteins using CryoEM technology. Because I had already done some research on structural biology in Boulder, I figured that I could apply skills I already knew to the new lab in Regensburg. This strategy worked out nicely for me as I was able to pick up new techniques fairly quickly, all whilst having the biochemistry background I needed. That being said, almost everyday I saw something new in the lab. This allowed me to expand my biochemistry knowledge further as I added new skills to my toolbox.

During the first three weeks of my stay, I typically worked with a different person each day in the lab so that I could see all of the various projects going on. At the end of the three weeks, I picked a project that I found most interesting, and I stuck with it for the remainder of my time.

This project dealt with the neural membrane transport protein GAT1. Some of the main topics that I worked on with this protein included immunostaining, radioactive uptake assays, cell culture transfection, protein purification, lipid reconstitution, and CryoEM imaging. My mentor for the project was PhD student, Laure G.M.. Laure was an amazing mentor—I simply cannot express how truly memorable she made the experience.

Overall, I cannot recommend this research opportunity enough to prospective students.