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DAAD RISE Internship: Scott Wu Final Report

My time in Germany was certainly a life-changing experience. Most memorable were the people—my supervisor, other students and researchers at the University, and various other international researchers who collectively enriched my time in Oldenburg. I was thoroughly impressed by my lab group at Universität Oldenburg, the DAAD organization, and the German culture as a whole. My experience was one that I will always speak highly of and will recommend to other students at the University of Chicago upon my return in late September. Thank you to my supervisor, Lena Dübbel, Professor Koch and his lab group, the German Chemical Institute, and the DAAD for granting me this opportunity to research in Germany and providing me the funds to help with my journey.

With regard to logistical recommendations, I would advise incoming RISE Germany interns to start the housing search early and rely on their supervisors or relatives in Germany for bank account access. I found that my own supervisor, Lena Dübbel, was very helpful when it came to both housing and banking advice; additionally, my uncle—he lives in Stuttgart—offered me access to his bank account. Sharing a flat with other German students or RISE interns is much more feasible and cheaper than renting a single flat or apartment. International monetary transfers are relatively easy, especially with companies like PayPal or Venmo. I would also highly recommend renting or buying a bike in Germany, as any investment in this type of transport is guaranteed to pay off during an internship. Biking is not only a cheap, easy method of transportation and exercise, but is also a cultural staple throughout Germany. All stores, universities, train stations, and other destinations are equipped with bike storage and bike racks.

My impression of research in Germany is that it is streamlined, organized, and immensely dependent upon constant communication. It is certainly not all that different from the research culture in the United States, however, it seems to be a bit more hierarchical in that a leading professor has several tiers of researchers and students all working together in order to elucidate a single topic; research in the United States is not quite so structured. My impression of German universities is that they are far less of a social site and seem to focus solely on academics. United States universities seem to be far more central to the lives of their students compared to German universities, which do not provide extensive social, athletic, or dormitory environments. While these differences among research and university cultures were apparent, they were not at all overwhelming; simply put, they were mild yet intriguing deviations from the norms that I have experienced back at my home university.

A typical day of my internship in Germany—a more thorough description of my research was submitted via the DAAD Questionnaire—involved arriving to the office around 8:45 AM, then beginning a new vesicle gradient with freshly cultured bone-marrow-derived macrophages, which would spin down in the centrifuge for a few hours. While in the centrifuge, I may dissect a mouse and harvest the bone marrow for its hematopoietic stem cells, or work on glass slides for cell stainings to be analyzed via fluorescent microscopy. At around 12:00 PM, I would usually head down to the tea room for lunch with the rest of the lab group, before returning the vesicle gradient and denaturing the harvested protein aggregates with a strong buffer. These samples would be run on a gel before being blotted; the blots would thereafter sit in the cold room overnight in blocking solution or primary antibody. Before leaving the office around 5:00 PM each day, I would usually feed cells or take care of other small tasks—preparing more buffers, cleaning equipment, etc. After leaving, I would usually go grocery shopping, eat a quick snack,

then head over to the local pool or gym to do a workout before returning for dinner. On lazier days, I would simply return back to my shared flat and watch a movie on Netflix before eating dinner and heading to bed.

With regard to my own research with Ms. Lena Dübbel, I found it exceedingly interesting that we were working on cutting-edge biochemistry that had only been developing for a few years. The cancer immunotherapy field, which is relatively novel in the medicine, is a fascinating topic that has interested me for years. Being able to work in this field and explore a burgeoning topic within an already new field was exciting for me. Additionally, utilizing and differentiating stem cells—another up-and-coming technology in cancer biology—was immensely interesting to me, as I have studied stem cell research and therapies since high school. Lastly, working relatively independently was new for me, which I both appreciated and enjoyed.

Highlights of my stay include watching the World Cup victory against Sweden in downtown Hamburg at the FanPark. I have never experienced that level of energy or joy in victory, as Toni Kroos's last-minute goal electrified the entire park and thousands of wet, cold spectators. A second highlight of my stay was the Heidelberg Conference; I greatly enjoyed presenting my research as well as meeting and learning from my fellow RISE Germany interns, especially those in fields similar to mine. A final highlight was visiting with my uncle and his family in Stuttgart; I do not often get to visit with him, and being able to spend time with him biking, swimming, and eating amazing food—southern German food is some of the best in the world, in my opinion—was quite pleasant.

My impression of Germany in general is that it is an efficient, healthy society that seems to care about serious topics and wastes very little time. My own experiences with Germans and their institutions showed just how dedicated they were to their communities as well as how much

they cared about their own education, careers, and health. Germany is a society I can see myself thriving in, and I look forward to returning at some point in my own career.

I agree that my report and accompanying pictures may be used by the DAAD in printed materials, presentations, and on websites in order to inform funding organizations, sponsors, and students about the RISE program.





