

RISE GERMANY INTERNSHIP 2023

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Major: Medical Physics

Host University: Hochschule Kaiserslautern - Zweibrücken campus

My time this summer in Germany was very rewarding, and was a great experience in which I not only developed my skills and knowledge in my field of interest, but also gained independence, resilience, and had a lot of unique experiences that led to personal self-growth.

My internship was on a biophysics project, investigating DNA and protein content in sperm using Raman spectroscopy, and how it correlates with fertility. I performed cell staining procedures with acridine orange and chromomycin (CMA3), analyzed the slides using fluorescence microscopy, and also did data collection and analysis with the Raman spectrometer. I enjoyed this project a lot, it was a unique blend of biology and physics, and applicable in medicine, and that is the precise field I am interested in. Being a medical physics major, and now as I am applying to medical school, it was a project that perfectly bridged my interests. I also gained a lot of practical laboratory skills through these cell staining and imaging procedures. While I did have previous lab experience, as a physics major, I didn't have extensive experience with biological or chemical lab practices, so my colleagues were of great help showing me the proper workplace protocols and were always willing to help whenever I had questions.

This project also enabled me to gain more confidence in my abilities. I was the only student working on this project, so I had to discuss any concerns or issues I ran into with my supervisor directly, or figure them out myself. This had its pros and cons; while I think it would have been nice to be working in more of a team setting, working alone also had its benefits. I gained a lot of independence, having to plan out and schedule the work myself, and when issues or roadblocks inevitably arised, to problem-solve on my own, before going to my supervisor. My supervisor was also very helpful and always made time to sit with me, explain things that I didn't understand, and help me come up with next steps on the project. He was a very great and effective boss, in the sense that he let me work on the project at my own time and pace, and did not micromanage, but was also invested in the work, a true team player, and was willing to help me progress.

I also was able to immerse myself in German culture and learn about their traditions, see different ways of life, and develop new friendships. I also got to travel and go on a few trips, which is something I appreciated greatly. I visited Nuremberg, where I met up with two other RISE interns and spent a long weekend with them, Kaiserslautern, Mannheim, and saw Heidelberg for the RISE meeting, where I got to meet many new interns, hear about their research, and also explore Heidelberg together. Outside of Germany, I went on a short weekend

trip to Switzerland, a day trip to Luxembourg, and near the end of my trip I went for 4 days to Paris.

I made some really great friends while abroad, particularly with another RISE intern who was at my same host institution. After work, we would often walk around town, get ice cream, and hang out at the public swimming pool, especially on those very hot days in June. We also became friends with some other German students, some who worked in her research group, and would frequently hang out all together as well. We all learnt a lot from each other, being such a diverse group, and we had a lot of fun conversations as well.

Overall, I had a great experience through the DAAD RISE program, and would recommend it to anyone who is passionate about research, enjoys learning about new cultures, and wants to develop independence and gain unique experiences while living abroad. Some tips I would suggest is to speak to your supervisors if they are able to help you with finding housing, as it was pretty difficult to do so, and you cannot stay in student housing (at least in my experience). I suggest using the DB Navigator app for all your public transport in your town and throughout Germany, it was usually the most reliable and had more information than Google Maps. I also urge you to take the opportunity to also travel both in and outside of Germany, whenever you get the chance! It is much easier and cheaper to visit places once in Europe, rather than from North America. Also take lots of pictures :)

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.