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## **RISE Report 2009**

I respect the research done in Germany very much. They take their research very seriously in the universities here. At my home institution San Diego State University, it is not required to do any research until your junior or even senior year, although it is recommended. It seems here in Germany, research is an integral part of the learning process, at least for those studying Chemistry anyway. I find that students get more out of the lecture and theory that they are learning, when they can see some of the real applications, and the actual chemicals they keep hearing about, in the lab. I was very impressed with the level of the equipment that I got to use here in RWTH Aachen University.

One thing that I found particularly interesting about my research was that I got to work with super critical carbon dioxide. This is carbon dioxide that has been pressurized so much that it has the properties of both a gas and a liquid. Also, instead of using the regular glassware that I usually use in the lab classes back in the US, here I had to do all of my experiments in steel glass window autoclaves.

A typical day of my internship would usually run like this:

- Arrive at 9am, 8:30am on Thursdays for our in-house seminars
- Depressurize the reaction from the day before, clean out the autoclave, and inject a Gas Chromatography sample from the previous day's experiment.
- Figure out with my PhD student which reactions would be running for the day, and work out how much of each reactant I would need for the day's experiments.
- Lunch – Can't lie, probably my favourite part of the day. At my lab, there's a "bread club" where a bunch of the people bring in food, pot luck style, then we take break in the Kaffeeraum, and eat open-face sandwiches (the Germans love them). Afterwards we would indulge in several games of Mau-Mau, the German version of Crazy Eights. It was here where I picked up a lot of the German that I learned during my stay, and I quickly became friends with a lot of my lab colleagues.

- For the rest of the afternoon I would set up, pressurize and heat my reactions, and then once the experiments were running I would update my lab journal and read some literature on the topic, and similar experiments.

One of the biggest highlights of my stay was the group trip to Heidelberg. It was just such a picturesque city, (I'm a sucker for castles, ruins or not), and it was just so cool meeting so many people, interested in the same things that I'm interested in, and who are looking to further their education, especially in Germany. Another highlight of my stay here was just getting to know my city that I stayed in here, Aachen. The architecture here is gorgeous (hello, it's Germany), but the city has a really cool history, and a lot of fun things to see and do. One of my regrets, now that I'm facing leaving Germany is that I didn't travel more. But Aachen, was just so much fun, and I wanted to spend time with the people here, from RISE and the German people I met in the lab, that every weekend it seemed I wanted to stay here rather than go explore somewhere new. An academic highlight of my stay, aside from all of the learning that I did day to day in the lab, both theoretical and practical, was that I had to present the results of my research to our group's in house seminar, and then again to the Collaborative Research Center. I was really nervous at first. Although I've taken courses in public speaking, I'd never had to present chemistry related topics to chemists before. In some of the previous seminars also, the presenters were faced with some really tough questions too. Luckily, my PhD student was beyond helpful, and the whole presentation went off without a hitch. Even some of the professors came up to me afterwards to tell me that I had done a good job, so that was very encouraging. I also had another RISE participant in my lab, so it was really good having someone else going through the exact same thing as me.

Coming to Germany this summer presented me with a lot of firsts. It was my first time living away from my family, first time in Europe, and my first time working in a lab. I didn't really know quite what to expect from Germany, but I had high hopes. Although my first week was pretty rough, dealing with homesickness and culture shock, I found it comforting that I still got to come to work everyday, communicating with new people, and at least I felt comfortable in chemistry. By the end of the first month, I was already getting sad that I would only be able to stay in Germany for one more month. In general, I found Germany to be a gorgeous country with a lot of history, one that is very interested in science, and especially with scientists from all over the world. The German people are extremely friendly, and with my limited skills in German, it really helps that so many of them speak English (everyone in

the lab had an excellent grasp of the English language). Part of the reason I applied for the RISE program this summer, was because I wanted to do research, and I thought it would be cool to visit Germany. Now because of my stay here, and the resources provided by the DAAD, I'm already looking into different ways that I'll be able to come back, and further pursue my studies in Germany.

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