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Home University: City College of New York, NY  
Host University: Technical University of Dresden  
Field of Study: Bioengineering

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## **RISE Report 2009**

This is Jingwei Zhang, currently a biomedical engineering junior at the City College of New York, USA. As a DAAD RISE summer 2009 participant, I felt fortunate to be given such valuable research opportunity to conduct research in Germany. It was one of the most exciting and meaningful summer I have ever had.

### **What is your impression of Germany in general?**

This trip was very special to me. It was the first time I visited Germany as well as Europe, and the first time I traveled and lived alone. My impression of Germany was that everyone was very polite, hard working and efficient. In my working place, the laboratory was clean, tidy and well equipped. It was a place for everything and everything was in its place. My mentors and colleagues could highly focus on their tasks and finish them in timely, satisfying manners. Under their instructions I was influenced and able to work harder and better.

This impression went far beyond my working place. From the postal service to daily shopping, every little thing gave me the feelings of smoothness. During the weekend I had been travelling around other German cities. The train system might be the best evidence to prove my point: easy to access, comfortable, punctual, and fast, especially the "ICE". In fact I liked it so much I bought some train magazines and postcards.

To summarize, efficient and polite were the words I will be using to describe Germany.

**What is your impression of research in Germany?**

I have been working in Max Bergmann Center of Biomaterials Dresden, Technische Universität Dresden in Dresden, Germany. The facility I worked in was new. Everything was very tidy and well maintained. Some may say it was tidy only because the building was new. However, from my point of view everyone put in a lot of time and effort to keep the good working environment. It has become a habit for everyone instead of a burden. Small things such as filling in tips into the boxes after using them were essentially part of the research. It was all about the convenience of others as well as to oneself. When the good working environment was maintained, the researches were significantly facilitated. The projects progressed steadily. It gave me a strong feeling that success was certain, just the matter of when.

**What did you find particularly interesting in your research?**

I involved in Human Mesenchymal Stem Cell Osteogenic Differentiation related researches. In Germany, for the first time I was able to work on mechanical stimulation of the stem cell, which was supported by numerous researches and intuitively would facilitate the Human Mesenchymal Stem Cell Osteogenic Differentiation. My main tasks were to test the new hydrostatic mechanical stimulation device and to propose a mechanical stimulation protocol for future researches. After reading many papers and doing quite a few round of testing, the tasks were completed and my internship came to an end. I really hope I will be able to continue the project sometime in the future.

## **Highlights of my stay**

The best moment of the stay had to be the meeting in Heidelberg. It was a fantastic three-day meeting. I had meet so many DAAD participants, the future elites, from various fields and backgrounds. We had dinners alone the river, visited the castle at night, talk and laugh in the bus. The visit to sanofi aventis insulin manufacture compound was the highlight of the highlight. For me, again, it was the first time ever to visit an biomedical industry compound. A bus trip around the compound was enough to convince me to explore further in Pharmaceutical industry as well as in PhD program in Germany.

## **Summary**

It is an exploration of Germany, Europe, the world, and even myself. By traveling and live alone I passed a small quiz of being an adult. It is kind of naive to say so but that is how I really feel. I understands more about Germany and career in biomedical engineering. I will seriously consider pursuit my PhD in Germany and hope I can participate in DAAD RISE again next summer.

At last, I want to say thank you very much, my mentors and professors in Dresden. Thank you very much, DAAD RISE, for giving me such wonderful summer. Thank you.

"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."