



MARSHALL PLAN SCHOLARSHIP FIELD REPORT AFTER STAY

PERSONAL DETAILS

First name	Ruben	Middle name	Gerrit
Last name	Scheuring		
From (DD.MM.YY)	15.01.17	To (DD.MM.YY)	23.08.17

General impression of my research stay

The USA met my expectations perfectly because of the good reputation of the American universities, the influence of the language and their diverse cultures. Here, I applied for an offered position at the Duke University in Durham, North Carolina. But thereby, the expectations were also quite high, which is why the USA didn't have it easy with me. The Americans I met so far were all very cheerful, open and friendly. However, it took a few weeks of getting used to their mentality before I could distinguish serious interest from the desire for a simple, good working friendly relationship. The contrast to our culture was certainly there and made the whole thing a refreshing experience. After seven months in the United States, I can say that Duke University is doing good, solid research and is in a class of its own, especially in the field of biomedical engineering. With its large, beautiful campus and a wide range of leisure activities, it offers an ideal platform for getting to know American student life. Athletes, in particular, are given special support and get their money's worth. For the creative and skilled craftsman, there is the Innovation Co-Lab, which offers laser cutters, 3D printers, CNC milling, etc. and is ideal for small and large DIY projects. All in all, I had an exceptionally nice time in the USA and can only recommend the Duke University. I have met many kind people from all over the world and have made valuable friendships. They came from countries such as Pakistan, India, Japan, China, Eritrea, Mexico, El Salvador, Brazil, Germany, Austria, France and of course the USA. That's probably what I value most about the United States. Cultural diversity. It helps us to see us, our species, more as an international and intercultural collective. This opening up and expansion of one's own (national/European) identity contributes to a peaceful future, and I am glad to be a part of it.

Thanks for this opportunity.

Quality of the host institution regarding research opportunity

I worked mostly in the Tata Lab at the Department of Cell Biology School of Medicine and partially in the Chilkoti Lab at the Department of Biomedical Engineering (Pratt School of Engineering) at the Duke University.

I have a high opinion of Dr. Chilkoti and the member of his lab. They are very well educated, helpful and conscientious. The quality of their laboratories and equipment was good. I received there a very good and personalized training. Their main field of interest was elastin-based polypeptides with thermo-responsive behavior. The Duke University has worldwide a very good reputation in biomedical engineering.

In contrast, I, unfortunately, cannot recommend the Tata Lab due to substantial discrepancies between European research standards (or at least standards I experienced in my education) and this laboratory. Handwashing before and after work and wearing a lab coat during euthanization of mice and isolation of the organs was rather an exception than the rule. Only laboratory gloves and denatured ethanol for disinfection were used. No hand sanitizer was available (!), although the Tata Lab worked with mice, human tissue samples (risk of contamination with hepatitis virus, HIV, ...) and viruses for genomic engineering. Some labs use denatured ethanol, but it is not recommended for all lab tasks. I had never worked before in a lab that used this kind of ethanol source since it contains up to 5% methanol. Methanol is known for being highly

toxic and carcinogenic. Especially in cell culture labs, a lot of ethanol is used for disinfection and thereby there exists a prolonged stress of the lungs by ethanol/methanol aerosols. And, indeed, I often felt pain in my lungs after hours of cell culture work. However, they ignored my request to switch the ethanol source. Furthermore, the whole department, including the cell culture labs weren't cleaned once in the seven months I worked there and were already very dirty when I arrived.

Another even more critical point was that the Tata Lab broke several times the rules of the Duke University regarding mice handling and also never reported severe incidents, such as waking up of euthanized mice during dissection. Ph.D. students were pushed to work with mice (euthanization, organ and stem cell isolation) before they even had heard about the online seminars about animal handling, which had to be obligatory completed before being allowed to work with mice. Moreover, it several times happened that they forgot to provide mice with animal feed and water or mice had to eat from moldy animal feed for days before it was changed. I did not observe once where they considered alternatives to animal experiments or thought about how to reduce the number of needed mice for an experiment. Mice were always treated like a source of dead matter. Their decisions were not driven by their moral or ethic rules, but more by their fear to get caught and to have to pay penalties.

Another no-go thing was that the children of Dr. Tata were allowed to play in the lab of a security level of S2. Eating and drinking next to carcasses of mice were also very usual. I was concerned about the health of his children.

I am a very conscientious person with strong ethical principles, and furthermore, I have sworn to have reverence for life and to protect it with all my energy. Due to all these dangerous rule violations, morally questionable behaviors, and unscientific/unacceptable working conditions, I, unfortunately, cannot recommend the Tata Lab to any person who takes the partially unspoken codex of scientists seriously.

Contact within the host institution, academic opportunity for academic collaboration during stay

Stefan Roberts (Chilkoti Lab, Department of Biomedical Engineering): stefan.roberts@duke.edu

Christina E. Barkauskas, MD (Department of Cell Biology): christina.barkauskas@duke.edu

Dr. Syed Faaiz Enam (Bellamkonda Lab, Pratt School of Engineering): faaiz.enam@duke.edu

Recommendations for future Marshall Plan applicants

The Duke University is famous for their Department of Biomedical Engineering (or Pratt School of Engineering) and has lots of very interesting research fields. This also includes tissue engineering. If somebody is especially interested in tissue engineering and regenerative medicine, I can also highly recommend the Wake Forest Institute for Regenerative Medicine (WFIRM), which is also in North Carolina, USA.

Contact Email after completion of research stay

r.scheuring@outlook.de

DECLARATION

- I hereby declare that all information provided in the application is to my best knowledge, correct, and complete.
- I agree to my name and contact details being passed on to other students interested in Marshall Plan Scholarship:
 yes NO

Date (DD.MM.YYYY)	02.10.2017	Signature	
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