

Field Report

by Blessing Omoregie

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General impression of research stay

I spend my internship in Prof. Manuel Rausch research group, at soft tissue biomechanics laboratory, Biomechanical Engineering (BME) department, at the University of Texas, Austin. The internship had a duration of around six months. I particularly choose to do my internship in the US, at the University of Texas and with Ph.D. Manuel Rausch, because his researches focus on deep vein thrombosis, mechanics of thin biological membranes (skin, heart valves, fetal membranes), damage and failure in soft tissues which are strong career interests for me and a good fit for my educational pedigree. The main goal of this project is to characterize the evolving biological-mechanical properties of fibrin/collagen co-gels as a model system for healing soft tissue following injury.

Upon arrived in Austin my supervisor Ph.D. Manuel Rausch introduced me to the whole team and the personnel department. The first few weeks can be described as "introduction-weeks". I got to know the processes of the laboratory, doing online course and exams to permit me to work in the laboratory, got introduced to different techniques and protocols. My supervise also told me about the project and his new interest in cell culture and cell-related research. He knew I had the required skills for the task due to my previous and current study program. Thereafter I found out that the research group have only worked with tissues and have never done any cell culture-related research, my colleagues had no experience with cell culture/handling and the laboratory was unequipped for such work too. After meeting all the requirement to work in the laboratory, I had to design a cell culture station inside the biomechanics laboratory. I immediately begin to order cell culture equipment, materials, and reagents, it took months for them to arrive and to get the equipment sterilized and certified.

Since the project was still at its start, I had to develop all protocols and plan the project. This was a great challenge and a whole new experience for me because I had to work independently and report back to my supervisors during our lab meetings like my colleagues who were Ph.D. students. However, I couldn't start my research until all equipment, materials and reagents arrival, it would have been nice to know beforehand that this was a new project and that I had to set it all up, this would have helped me make proper planes for my stay and enough time for the project. This project required more than six months because the project is very broad and would be good for a Ph.D. Overall I enjoyed the time that spent in this great lab and I might return for a Ph.D.

Quality of the host institution

I choose to do my internship at the University of Texas because it is one of the best universities in the US and it is recognized worldwide for being the leader in research and for giving opportunities to future researchers from which they will profit a lifetime. The University and most especially Traci Laird, the senior administrative associate of BME

department, the different BEM laboratory groups and the lab group of Dr. Rausch were cooperative and tried their best to make my stay as enjoyable and informative as possible. My lab group as well as my supervisor informed themselves what the focus and goal of my internship was and make sure my internship was a success. Besides, I did not only work on my project but was integrated into the group and other projects so I could learn a lot of new techniques and could perform a lot of Experiments besides the ones of my project. This experience also helping me to get to know the working structure within a laboratory and how a typical day in this business looks like.

Contacts within the host institution and Inclusion in the organization

As already mentioned I had and still have a good connection with my supervisor as well as with every member of the lab group and also with members from other groups in the BME department. One thing I got to like and contribution to my overall expression during my stay was the group lunch, dinner and get together often organized by my supervisor and colleagues. These events brought us closer together and after every lunch or outing, one could always feel the newly found motivation within the group. My best moment was the day we made a trip to San Antonio for a basketball game between SA Spurs and MIA Heat and one of my colleague, Kiernan Akers is original from that city and he was so excited to show us around his home city. In general, my colleagues and supervisors were so friendly and nice that sometimes they asked me about my plans for the weekends and provided me with insider-knowledge and must-sees sight in and around the city. They sometimes even offer to show me around and therefore also contributed to my positive experience. The relationships within my group as well as to other groups was familiar and relaxed, so working together was always fun but productive and informative at the same time. This is one aspect that I do not want to miss in my future career. The institute also organizes different events within the institution, within the visiting students and scholars and this helps to connect with people, professors and researchers from all over the world.

Recommendations for future Marshall Plan Students

My recommendations for future Marshall plan students are to inform their external supervisors in detail about their abilities and experience beforehand and also get themselves fully informed about their project in details and what is required of them in advance. This makes it easier for both parties to set their expectations to the correct level and avoids a long period to adjust to the new situation. I would also recommend talking with students or volunteers that have been there before, also if they did not necessarily stem from your university, just to get some additional tips and to already get there with an idea of what can be expected.

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