

Field Report

General Impression

Strominger Laboratory is aiming on the immune tolerance problematics. Currently there are numerous ongoing projects addressing Major Histocompatibility Complexes (MHC) class I and II, as their genes are linked to many human autoimmune diseases. The main part of the research is specialized on immunobiology of pregnancy and the studies of placenta, using trophoblast and lymphocytes isolated from primary cells and trophoblast-like cell lines JEG3 and Bewo, as well as decidual stromal cells (DCS).

The research group I was working with can be found in Sherman Fairchild building at 7 Divinity Avenue, where it shares the lab with other lab groups, such as Cowan or Lee Laboratory. At the time of my stay, there were only 6 researchers (including me), but the lab is still looking for one more postdoctoral fellow and one lab technician. Despite the fact everyone was very busy with their projects, colleagues were friendly, willing to help and didn't hesitate to find time for you, whenever needed. My supervisor, Tamara Tilburgs has been an amazing mentor and thought me all the necessary and even more. I was assigned to two projects. 1st project concerned the isolation of trophoblasts from fresh placenta samples, while the 2nd project (shared with my precious colleague and friend Hannah Ananda Bougleux Gomes) aimed on microRNA knock outs using CRISPR/Cas9. I was able to plan the experiments independently, however a high flexibility was needed, as we often received unplanned placenta samples. My overall impressions regarding the internship are highly positive; the internship showed me how attractive research is and motivated me to pursue in immunology and pregnancy problematics further. Thus, I am currently applying for Immunology master programmes in Europe.

Quality of the host institution

The Department of Stem Cell and Regenerative Biology was established 10 years ago. Now there are over 200 scientists conducting their research in broad range of topics – such as cancer, epigenetics, ageing and stem cells, nuclear reprogramming and many more. Over the 10 years, more than 300 scientific papers have been published and many of the discoveries

have wide-spread clinical applications. Research is carried out in the state-of-the-art laboratories located in Cambridge and in many of Harvard's affiliated world-class hospitals. The department has two main aims: Research and Education. It provides great opportunities for all students (undergraduate students, graduate students and postdoctoral fellows) to learn, grow and improve their laboratory skills.

Contacts within the host institution, inclusions in the organization

Harvard University has a very international environment. The contacts you are able to make are very beneficial for your personal and most importantly professional growth.

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Recommendations for Future Marshall Plan Fellows

I would greatly recommend accomplishing an internship at Harvard University. The edge-cutting scientific environment and social platform open doors of many other excellent opportunities. Moreover, the knowledge and practical skills gained during the internship are priceless and highly valued by employers.