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(Abroad • Domestic) Internship report form (Student)

2020/04/22 (Year/Month/Day)

Name	Alireza Nasoori
Laboratory	Wildlife Biology and Medicine
Year (Grade)	Dc4
Internship institution	Division of Biomedical Sciences, McGill University
Internship period	Internship period: 03/05/2020 - 03/22/2020 (Departure Date from Sapporo: 03/03/2020, Arrival Date in Sapporo: 03/23/2020)
Purpose	To learn about osteoclastogenesis and cell adhesion.

- The reason why you chose this institute

As part of my PhD project, I needed training regarding osteoclastogenesis and cell adhesion. The main goal was to improve my skills and understanding regarding the mentioned subject on cellular scale at Dr. Mari Kaartinen's Lab, McGill University, Canada. Also, I aimed to learn about the mindset of McGill University's students and teachers by joining the discussions, journal clubs, etc. In addition, I wanted to improve my soft skills and future working network.

- Result of the activity (about 800 words、 provide photos, tables and figures that clearly show the activities during the period)

From the beginning to the end, my internship period was heavily affected by Covi-19. Therefore, I faced many restrictions through my internship, and I could not fulfil my aims during the internship such as lab works, seminars, and discussions. But, the sum of activities are as follows:

At the night of 3rd March 2020: arrival.

5th March: visiting Dr. Kaartinen, giving my documents to her. Visiting lab members.

6th March: visiting different parts of the lab and the place for training.

9th to 12th March: presenting my PhD project, making the schedule for my research activity, and a brief demonstration for osteoclastogenesis, making fibronectin-free medium for cell culture, adipocyte culture and stain.

In my presentation I introduced bears as a novel model for bone study, and that their cells can be used as a source for bone cell studies. The audience were interested in the subject. Since they did not know much about hibernation and bears they asked me lots of questions. The questions were more about hibernating bears characteristics, and that how previous studies reported bone preservation in hibernating bears. I provided them with the answers as far as I know. Also, there were many questions regarding the ingredients of bears serum. In this respect, they proposed me to further assess bears serum in hibernating and active individuals. However, due to the lack of commercial kits for bears it was difficult to measure different proteins and markers in bears. In case of sufficient budget, the serum properties of bears is worth being checked.

In the lab, one of the students who worked on osteoclasts culture, explained the procedure that they collect samples from animals bone marrow, isolate and culture them. However, we did not find the opportunity to work on this.

The use of fibronectin and fibronectin free was explained by one of the students, but we could not practice on this.

There are several workshops regularly held at McGill University to train students. They are free, and are arranged by supervisors and lab staff. Students go through different workshops in different labs, depending on their need and project. The workshops present both theoretical and practical training, and finally hold test for participants. Unfortunately, due to my short stay I missed the chance to participate in the workshops.

PhD at the Division of Biomedical Sciences of McGill University is mainly research-based, and students can flexibly be present in the lab based on their need to conduct lab experiments.

From 13th March until the end, McGill University suspended all classes and lab activities due to Covid-19.

I contacted the Graduate School, Shizuka san, and she made a return ticket for 22nd March. During this time, due to self-isolation, I stayed in my place. Everyday I had a walk for a few minutes around my place. Absolutely boring and stressful. McGill University adopted strict measures to minimize the exposure of students and staff to Covid-19.

Beside the technical advantages, the internship was a great experience in different aspects: 1. In order to find a suitable place for internship, I had to search different

universities and institutes which are working on similar areas to my current PhD project. This broaden my knowledge about the current situation in my area of research. 2. I learned how to communicate and negotiate to arrange for an internship. 3. Visa application is a long-term process, which itself can be a valuable experience. 4. Getting to know a new group who work on bone and metabolism was important. On the other hand, they were interested to see me as a researcher in wildlife who works on bone biology.





- What do you think the positive impact of the activity will have on your further career path?

My internship had some problems, and I could not even have a last meeting with the host. But, even during that short period of time, I had the chance to introduce my work and how I used wildlife samples for bone cell studies. The McGill University researchers liked this idea. I hope in the future I will extend my collaboration whether directly or via email with those researchers. Doing the internship in an accredited university like McGill is a point in my CV, for my future career.

- Advice for your junior fellows

Given the unforeseen events, travel insurance is highly essential for doing overseas activities. Also, it is very crucial that students learn how to find medical services at the host city.

One more thing is that students should apply for visa and Graduate School Vetlog well before the beginning of the internship; like 4 months prior the internship.

Approval of supervisor	Institution • Official title • Name
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- ※1 Send the electronic file to the Leading School section, International Affairs Office
- ※2 Attach a copy certificate of the content of internship activity that is prepared by the counterpart at the internship institution (any form with a signature of the counterpart).
- ※3 The Steering Committee of the Leading Program will first confirm the content of this report and report will be forwarded to the Educational Affairs Committee for credits evaluation.

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