



Experience Report

Performing a 3-Month Research Internship in Canada Increases Social Interactions and Yields Joy and Fascination

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REPORT INFO

Country:	Canada
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Host Institution:	University of Alberta
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Internship period:	Summer 2018
Duration:	3 months

ABSTRACT

Canada and its high quality of life together with open-minded people and vast landscapes make it very attractive to live and work in. To crown my studies of Molecular Life Sciences and to explore the field of neurosciences I did an internship researching Alzheimer's disease at the University of Alberta in Edmonton, Canada. The effort of going through the application process for the position, funding and visa was made worthwhile by a big and open city, generous and welcoming people as well as an astounding nature. Being involved in developing a new method for Alzheimer's research showed me new perspectives of this field and gave me inspiration for my future scientific career. Although experiencing winter would be necessary for a final conclusion, my summer internship intensified my desire of moving to Canada.

1. Introduction

Canada, the land of the maple syrup and the reputation of very polite and overly apologetic inhabitants, was ranked among the top 10 best countries according to the U.S. News & World Report in 2018 [1]. Its strong economy, well-balanced

social programs and advanced health care system offer great opportunities for jobs, recreation and building a life in general. Canada's openness to immigrants of every culture, race and sexual orientation paints a very progressive picture and makes it an attractive country to move to.

Being the second largest country in the world, it not only has a lot of space to offer but also impresses with breathtaking landscapes, abundant wildlife and natural resources. On top of that, Canada was ranked fourth in the world for scientific research quality by the Council of Canadian Academies in 2012 [2].

Against this background it is needless to say that it has always been a personal desire to experience living and working in Canada and I wanted to explore this opportunity with a 3-month internship. I chose the University of Alberta (UofA) because it is one of the leading research universities in Canada and also a member of the Campus Alberta Neuroscience (CAN) collaboration which promotes the cooperation and success of neuroscience.

Since neuroscience always interested me but went short in my study program of Molecular Life Sciences at the University of Hamburg, I applied to a research group about Alzheimer's disease at the UofA in the Department of Pharmacology.

The 3-month stay was intended to answer the question if I want to build a life in Canada in the future. This report investigates my preparation for a research internship abroad and summarizes my experiences made in Canada.

2. Material and Methods

2.1. Application for an Internship

Preparing for an internship in Canada begins with the will to deal with paperwork, back and forth email exchanges, confusion and setbacks. The first thing to do was to contact the research group directly with my CV attached and ask for a summer internship.

I asked for an unpaid position due to the higher probability of being accepted. After receiving the firm commitment, I was referred to the department administrator who asked for a copy of my passport, a brief project description and a letter from the University of Hamburg acknowledging the internship.

2.2. Application for Funding

In addition to the savings I had made from student assistant jobs and side jobs I applied for the *Hamburgglobal* Scholarship. Being financially supported also facilitated the application process at the UofA and gave my proposition more credibility. Since the internship was scheduled to start in June 2018 I applied for the *Hamburgglobal* Scholarship in the fall term of 2017. It was simple to follow the checklist on the website and after 1.5 months I received the approval.

2.3. Application for Visa

After I sent the Scholarship Letter to the UofA, they sent me the official Invitation Letter with which I could apply for a work permit visa. It also included instructions for applying and a receipt that they had already paid the necessary Employer Compliance Fee of 230\$ (150€).

The application process, again, relied on working through a checklist, but since many of the requirements were directed towards workers applying for a work permit, a lot of the information was unclear from a student's point of view. In the end, the essentials were: a completed application form, a reference letter from the University of Hamburg, the invitation letter from the UofA, certificates, CV, photo and passport. In order to apply, it

was necessary to pay an application fee of 155\$ (100€) with credit card. Surprisingly, it only took 1 week for receiving the approval.

2.4. Flights

There are a lot of metasearch engines for cheap flights which I used to get an idea of the prices and flight duration. It was recommended to book a round trip because it is supposed to be cheaper plus there was a rumor that return tickets are necessary in order to be granted entry to Canada. Since I aimed to be flexible about the day of return I booked an open return ticket with a travel agency. The costs were about 950€ and included a 5 night stopover in Iceland on the way back which was possible by travelling with Icelandair.

2.5. Insurance

The affiliation of the *Hamburglobal* program with the DAAD allowed for taking out the combined health, accident and liability insurance under the DAAD group insurance. It offered the essential insurances, was comparably cheap and simple to apply for.

3. Results

3.1. Board and Lodgings

The streets of Edmonton are based on a grid system and are structured in Avenues running east to west and Streets running south to north. Accommodations mainly consist of individual houses alongside the avenues conveying a typical American suburban look. Prices for sharing or renting a room in such houses range from 500 to 800\$ (400-600€) per month.

Before I could even start looking through accommodation websites, a friend of friends offered me a room in his house for the time being which was as generous as it was relieving. I was immediately integrated in the social environment of the neighbourhood and got to walk the neighbour's dog on a daily basis. The so called dog park turned out to be an idyllic ravine in the middle of the city with creeks and dense woods offering the opportunity to escape into nature.

The house I lived at was located on the south side of the North Saskatchewan River which contains the University area and the historic district Old Strathcona (Figure 1). This district is Edmonton's main entertainment strip and centers on Whyte Avenue, harbouring restaurants, pubs, hotels, theatres and live music venues. Whyte Ave almost directly connected my house with the University, which was about 20 min away. A bus ticket was 3.25\$ (2.10€) per ride and lasted 90 min for return, transfer, or using the Light Rail Transit (LRT). I was lucky enough to borrow a bike from my roommate and take the well-developed bike path parallel to Whyte Ave to the University.



Figure 1: The historic district Old Strathcona. It is home to restaurants, theatres and live-performance venues, and serves as shopping hub for residents and students. Of note is the Tim Hortons sign which advertises the characteristic Canadian fast food restaurant that can be found at every turn.

Since summer is the time of semester vacation, the UofA had no welcoming programs for me to offer, which was all what the employee had to say – per email and in person – when I asked for orientation and activities. For that reason I learned relatively late about the broad activity offers of the UofA. Finally, I was able to use the program to go camping at the nearby Elk Island National Park or take part in the weekly and daily beach volleyball and soccer events.

The University itself unfortunately offered no canteen, so lunch had to be either prepared or purchased at the expensive hospital cafeteria or at one of the numerous fast food chains around campus – the typical Canadian franchise Tim Hortons was even integrated in the building I was in. For grocery shopping, my go-to grocery stores were Safeway or No Frills, since I did not have a car to target Superstore or Costco. As nearly everything in Canada, groceries are more expensive than in Germany. That is what you think when you look at the price tag and that is even more what you think when 5% tax is added at the cash register. Eventually I got used to the prices and learned to design lunch and needs around them.

3.2. Research Internship

The laboratory was located on the 9th floor of the Medical Sciences Building and consisted of one room with work benches, an additional cell culture room and the office of the principal investigator (PI). I had 5 co-workers in the lab, 2 of which had also just started working there. I was welcomed by everyone and received a short introduction by the lab technician. I met with the department administrator to

fill out formalities like insurance statements, and later talked to the PI about my project.

In general, the supervision was rather loose and based on trust which was not a problem since I was already familiar with the basic methods and the equipment. Independent working and detailed knowledge about the topic were expected but questions of all regards were never an issue. Early on, I was entrusted with optimizing the cutting edge technology Imaging Flow Cytometry for localizing the Alzheimer's protein amyloid beta in extracellular vesicles. Since it is a state-of-the-art method, we were one of the first groups to use it for neurodegeneration research and I was free to develop and test own ideas. Although 3 months are generally not enough time for big achievements in science, I at least got to uncover that a commonly used solution was contaminated and could lay the foundation for future experiments. I concluded my summer internship with a presentation.

3.3. Leisure Time

Edmonton has the nickname of being Canada's Festival City, and especially in summer the festivals are numerous. Right at the beginning I stumbled into Edmonton's Pride Parade which represented the city's very friendly and open attitude. Events happened almost on a weekly basis and included Heritage Festival, Taste of Edmonton, Fringe Festival, K-Days and the Folk Music Festival. I was also lucky enough to experience Canada Day on 1st of July which set a lively mood and finished with fireworks.



Figure 2: The Canadian Rockies in Waterton, Alberta. The photo was taken on the Crypt Lake Trail, one of the top 20 most thrilling hiking trails in the world according to National Geographic [3]. It resembles the picture I always had in mind when thinking of Canada.

People on the streets were very friendly and chatty, and even the ones asking for drugs wished me a nice day afterwards. The warm summer months motivated everyone to take action and go outside. The spirit of doing things together was also present in the department which organized a recreational golf tournament and a barbecue in the first week I was there. I quickly made friends with my lab and the neighbouring labs and we regularly went out for dinner and drinks or other activities such as boxing, mini golf, movies or jogging.

The smartphone is a necessity in these matters and works best with a cheap prepaid card instead of a binding mobile phone plan. Cars are not absolutely required but help to quickly get around the city or drive to places farther away. Since Canada relies on cars, almost everyone there knows how to drive at early age. That is why getting from A to B with friends was never a problem and I often got dropped off directly at home.

Due to the internship I spend most of my time in Edmonton which was surprisingly flat in geography and other than the ravine did not resemble the classical Canada landscape pictures. For that reason my roommates took me on a weekend trip to the Canadian Rockies and I got to experience Canada as I had always imagined it (Figure 2).

4. Discussion

The goal of my summer internship in Canada was to validate if working and living in Canada are as attractive as expected. The application process for the internship was complex and elaborate but absolutely worth it. I got extremely lucky with the accommodation situation but even without it, Edmonton offers enough space for everybody and it is easy to connect with people. The suburban feeling and the many parks play into the openness of Edmonton while the downtown skyline still maintains the awareness of living in a big city.

The many festivals and opportunities for activities let you discover new things every day. Summer time with weather and temperatures comparable to Germany play a major role in this spirit as I was told many times that the winter in Edmonton with -30°C is not as enjoyable.

Negative aspects of my summer internship were not only the missing orientation program from the UofA but also the forest fires in British Columbia. Although the fires themselves did not endanger Edmonton, the resulting smoke covered the city for weeks (Figure 3). Another low of my stay was the number of petty crimes I encountered. That ranged from witnessing shop theft and strangers entering your house unasked, to stolen mail and even stolen bicycles.

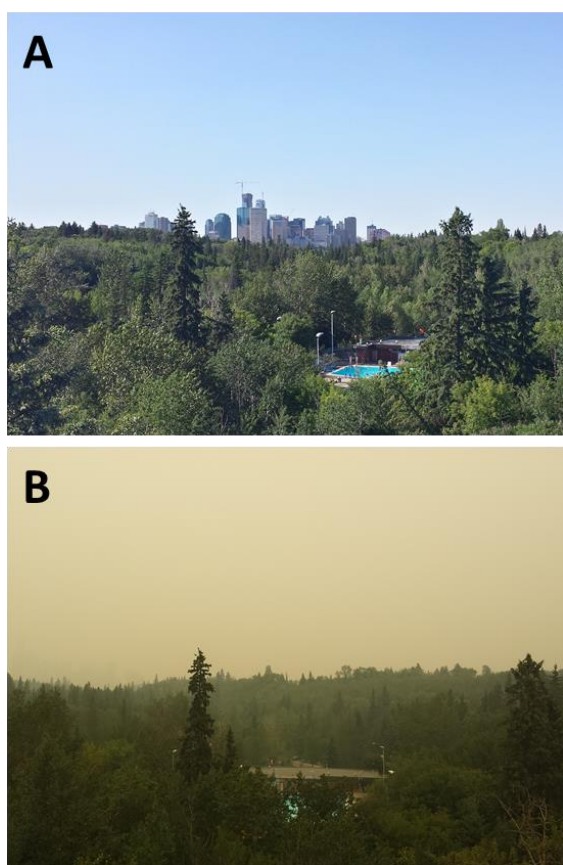


Figure 3: Effect of the forest fires in British Columbia. (A) The skyline of Edmonton before the fires. (B) The same view after the fires. The dense smoke let Edmonton's skyline disappear completely.

In conclusion, the 3-month research internship in Canada was a fantastic experience and made the effort of organizing it worthwhile. I made a lot of good friends, spend almost every day after work outside and had more social interactions and adventures than ever. The research itself was challenging but fascinating and got me an idea of working in neurosciences. I felt privileged to work with a cutting edge technology and glad to lay the foundation for future projects. However, next time I would ask for a paid position which is not uncommon.

Although I have yet to experience the cold and harsh Canadian winter, my summer internship supplied me with friends, fascination and the confidence that Canada is the country I want to live and work in.

Conflict of Interest

I agree that my report will be published on the websites of the Department of International Affairs (including photos).

Acknowledgements

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References

- [1] U.S. News & World Report, "Best Countries 2018," 2018.
- [2] The Council of Canadian Academies, "The State of Science and Technology in Canada," 2012.
- [3] D. Schnitzspahn and A. Bisharat, "19 Thrilling Trails Guaranteed to Make Your Heart Race," *Natl. Geogr. Mag.*, 2017.