

Final report

Name of intern: Magdalena Wolska

Home University/Country: Poland

Subject: Biotechnology

Guest University/Country: Lund, Sweden

Name of supervisor: Katarzyna Radke

Part 1. General information about

1.1 Your application (motivation)

During my previous internships I was given an idea how to organise my work by myself and I also saw various differences and similarities in approaching the same scientific problems depending on the place experiments are conducted. I also believe that internships are great opportunity to increase skills in mapping out and conducting experiments and in refining my teamwork. I have always intended to continue my career in science and pursue PhD abroad. BARI seemed like a perfect idea to gain more experience and have a chance to experience and immerse myself in Sweden's life. Internships in foreign countries not only give a unique opportunity to compare laboratory techniques among various countries but also to get to know a different culture first-hand.

1.2 Your preparation

First of all, I checked how widespread English actually is in Sweden. Since almost everyone here speaks English in some kind of fluent level, I didn't have to worry about having to use Swedish or being unable to communicate with people. The moment the internship dates were set I looked online to find a suitable health policy for the period I would spend there. After fulfilling that task I started to search for a flat to rent. Facebook is indeed a very useful resource and in no time, I found few groups used specifically for renting purposes. Since the internship was happening during Covid-19 pandemic I had to look up if there were any specific restrictions in Sweden at the time. Fortunately for me pandemic restrictions in Sweden were not strict enough to affect me working at the hosting university or my travel.

1.3 Your travel

There are 3 possible ways of getting from Poland to Sweden: plane, ferry or by bus/car. Considering I had a large suitcase I choose the ferry since it was cheaper than paying for additional baggage on a plane. I took the overnight one so the travel didn't feel very long. For the first few days a family member came with me to Sweden to help me with moving. I strongly recommend going with someone as it is far more pleasant to travel in a group.

1.4 Your accommodation

There are multiple Facebook groups and other sites where you can find available accommodation but please be careful when using them. There is a lot of scammers who prey on international students. As for Lund the best option would be Kemicentrum guest lodgings (<http://www.kc.lu.se/english/employee/service/lodgings/>) for short-term accommodation. It belongs to Lund University so they are completely safe and very easy to book for international students. It is also the place where I stayed for the duration of internship. I lived in a corridor room, sharing a flat with 5 other students.

1.5 Your life in the host country

I was positively surprised by how welcoming everyone in Sweden is. Whenever I had any problems each time there were a few people trying to help me solve them. Thankfully I was able to meet many new, fascinating people whose knowledge and experiences helped to broaden my own horizons. Being able to meet people whose lives are in some aspects completely different from mine, but in some other completely similar to my own encounters. I strongly believe that comparing job or life experience with people from various environments is essential in continuous development. Moreover, making new friends with habits and traditions that I know nothing of, learning from them routines that I can incorporate in my life – both professional and personal is simply an exciting opportunity.

A prevalent practice in Sweden that I really enjoyed was fika. It's a Swedish custom, a kind of social break where people gather to have a cup of coffee or to eat a snack. This ritual is not just for having a short coffee break, it's for everyone to get in touch with themselves and people around them. Fika was a perfect opportunity to meet and hang out with people I already knew or get to know employees I didn't work with directly. Another custom I really started to fancy during my stay was riding a bike. It is very common for Swedish people to bike everywhere instead of using public means of transport, especially in smaller towns like Lund.

As for the finances, Sweden in comparison with Poland is extremely expensive. It doesn't come as a surprise although without the scholarship I probably wouldn't be able to support myself while living in Sweden.

Part 2. Information about the project and your tasks

2.1 Information about the research project (short description of the project and your tasks)

I worked in Molecular Pediatric Oncology research group (PI Daniel Bexell) whose area of interest are: unravelling mechanisms leading to metastasis and treatment resistance of childhood cancer neuroblastoma, and testing compounds targeting aggressive neuroblastoma. The project I participated in was about drug screening in neuroblastoma organoids in order to find cytotoxic substances and to look for possible synergy that could exist among them. Combinations of drugs are used because they often provide therapeutic benefits over individual drugs - they can display synergy, a greatly enhanced effects when used in combination. I worked with neuroblastoma patient-derived xenografts (PDXs). These PDXs retain the genotype, phenotype, tumorigenic, and metastatic properties of the tumours from which they were derived, making them authentic models for studying drug resistance.

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My tasks entailed maintaining organoid cultures, conducting drug screening, two-drug combination testing in those cultures and reporting results to the person in charge. I worked with 2 neuroblastoma patient derived cell lines. First, I conducted drug screening with 5 compounds in numerous concentrations. After establishing that they indeed had cytotoxic effect on tumour cells I went on with screening two-drug combinations to look for synergy. After that I processed raw data from cytotoxicity assays (drug screening and two-drug combination testing) and then analysed the results with help of my supervisor.

2.2 Your colleagues

Pleasant work environment made it easy to get to know everyone fast. I directly worked with only 2 people but everyone in the lab group were very friendly and helpful. Whenever I had any questions, I could ask anyone for help and they would offer their knowledge and assistance. My direct supervisor was Katarzyna Radke and I would like to say she did superb job at teaching and guiding me. She was very friendly but also tried to teach me as much as possible in such a short amount of time, without overwhelming me with tasks.

2.3 The research institution

I worked in Division of Translational Cancer Research (TCR) at Lund University. TCR is formed by 9 research groups working on projects with the common goal of improving cancer diagnostics and cancer therapy. Areas of interest at this institution include human genetics, mouse genetics, human tissue platform, stem cell biology and advanced imaging, aiming at creating novel diagnostic tools and therapeutic modalities. TCR is localized in Medicon Village, a facility including multiple research laboratories meeting all current standards including those covering ventilation, gases and other media. It includes labs for chemistry and biochemistry, cell biology labs, clean rooms and pharmaceutical labs. All of the research laboratories I worked in and all of the equipment was up-to-date.

2.4 Your experience working within the project

Among all of my previous experiences I would consider this internship to be the best I ever participated in. It gave me a perfect opportunity to learn new skills and expand my knowledge. First, I was introduced to the laboratory and the project I would be working on but soon after I started working independently. Thanks to that I learnt how to better prioritize my tasks and manage my time. For me personally BARI internship was also an opportunity to test drive a career without making any serious commitments. It helped me make decision about pursuing scientific career in the future.

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