

DAAD RISE Final Internship Report: Kellie Horan

I'm Kellie Horan, a final year undergraduate student specialising in Genetics at University College Dublin, Ireland. Last summer, I completed an 11-week research project in Germany as a DAAD Rise Scholar (2021). I undertook my internship in the Institute of Immunology, at UKSH in Kiel. Kiel is a city in the North of Germany, about an hour from Hamburg. It is known as the 'Sailing City' as it is situated beside the sea and watersports are popular there. It is a vibrant student city, with beautiful beaches and a relaxed way of life. I found the people to be open, friendly and warm. My favourite part of my summer there was going to the beach with my friends after working in the lab on a hot day.

My research project was entitled "The Genetic Manipulation of T and B Cell Interaction in lymphoid and non-lymphoid tissues". I loved my research topic as it was based around genetic manipulation of the immune system, which I found to be very topical and cutting-edge. Most of my internship focused on optimising a novel protocol for the electroporation of resting murine T cells in order to knock out immunologically-relevant genes. I was excited to gain experience in cutting-edge technologies such as CRISPR/Cas9. I learned completely new techniques such as flow cytometry and electroporation. I gained invaluable experience in working with mice, a model organism I had never worked with before. I also enjoyed this project as the research topic had applications to human health and disease, particularly immune function. This project was relevant to both the overactivation of immune cells in autoimmune disease and also the boosting of the immune system to fight disease e.g. in vaccination - a very important, topical issue during the current pandemic!

My lab group, that of Prof. Andreas Hutloff and under the supervision of Julia Kuhrau, were so welcoming to me, which eased any nerves about spending 3 months in a new working environment. Each day, the lab group ate lunch together outside in the botanical gardens on site with a view of the sea, which was usually my favourite part of the day! I also really enjoyed presenting my data at the lab group meetings, which took place weekly. I became more comfortable presenting graphs, speaking to a large group and discussing my experiments. This whole experience definitely boosted my confidence in my own abilities and has motivated me to pursue a career in research. I would love to continue my studies and complete a PhD.

Here are some top tips: Firstly, accommodation is probably the most important thing to organise and your supervisor can often help! Luckily, my project supervisor was a great help in securing accommodation in student dorms. I would definitely recommend staying with other students as it is easier to make friends quickly; The dorms were full of international and Erasmus students, with a very welcoming atmosphere. I would highly recommend opening an N26 bank account using the N26 app on your phone. It makes life a lot easier once in Germany, as you can pay with your phone and use it to get paid your monthly stipend. My best tip is to travel as much as you can on

weekends! It's a once in a lifetime experience to travel all over Europe by train while gaining invaluable research experience. On my weekends off, I travelled to Berlin, Munich, Amsterdam, Prague, Austria and Denmark to name just a few. Some of these were solo trips and some were group trips where I got to know other interns based all over Germany. You can stay in hostels pretty cheaply and I would recommend purchasing an interrail pass to save money.



Köln, Germany

To conclude, I absolutely loved my experience in Germany. I loved the culture, the people, the cities, the food - everything! I would 110% recommend the RISE programme to anyone who is interested. Not only is it a fantastic academic and career opportunity, but it is a life-changing experience that contributed to my own personal growth. The RISE Programme and my time in Germany surpassed all my wildest expectations. I have made friends for life and I definitely plan to return to Germany in the near future.

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