

Peter Martin – Research Placement in New York

In June, I finally took off from London Gatwick, very excited. A culmination of months of part time jobs, visas, health insurance, project proposals and more, all around my University course. The flight left at nine o'clock GMT, arriving midnight EST: I had not slept a wink as I waited to land at JFK airport, New York.

The first week I was there, I stayed in Williamsburg Brooklyn, a vibrant and alternative culture was abounded around me. At work, I was getting blood tests, entrance interviews and tours. The laboratory sat on the East River, overlooking Roosevelt Island, in my spare time I was looking for apartments within my price range, not an easy task in Manhattan, but a great opportunity to just wander around and explore New York. The highlight of that week was the 4th of July Macey's fireworks over the East River, with the backdrop of Manhattan framing them beautifully.

After that week, I moved into my apartment in the Upper East Side and started work proper in the laboratory, directly under the supervision of Dr Kirsty Culley one of the research fellows there, who had done her PhD at my university (UEA). She is working on the cellular cascades that are involved with the onset or initiation of Osteoarthritis (OA), specifically a signalling cascade known as the NF-kappaB pathway. This was investigated using IKK-alpha or IKK-beta cKO murine models paired with an established OA trigger. Throughout my time there, I assisted Dr Culley in a small way with her on-going work, which is currently five years in the making!

Over my first few weeks I worked on establishing protocols for the laboratories new PCR machine. This ranged from primer concentration and efficiency, to run temperature and sample volume. For the rest of my time there the majority of my work was done on a project involving a different genetic lineage of mice (ELF3 cKO). These mice had a specific gene knocked out that is thought to have a key role in arthritis onset. I ran RT-PCRs on cDNA samples taken from these mice to establish, on a cellular level, the amount of damage they had received. Concurrently using histological techniques, such as Saf-O staining and TUNEL (Fluorescent antibody staining) to quantify the damage to the whole tissue.

Through-out my time there after work I went out as much as possible, wandering around Central Park and the world class museums that lined museum mile. Then retiring to a rooftop bar or restaurant with a book overlooking the city. By the end of my months there, I had learned all of the best times to go (otherwise crowding is an issue), making for some very nice evenings. When I required more excitement, the Yankees were only a subway ride away as well as zoos, Broadway and any shopping you can desire.

The American people were some of the most welcoming I have met, every place I went for dinner or a drink, those sat either side of you would engage in lively conversation. My favourite place in the city was the Frick Museum, a mansion built by the art loving industrialist Henry Clay Frick (1849-1919), who had drawn together an incredible collection

of paintings, sculptures and decorations, which had a wonderful roman-esce court yard that I sat and worked in as often as possible.

New York is entirely unique in itself, no-place I have visited can come close to displaying the sheer industrial capability of the Human race. I did however grow up amongst British countryside, and now I study at one of the greenest universities in Europe, so the top up of green at Central Park could only last so long. Once a month I travelled out of New York for at least a weekend to visit the Green Mountains in Vermont: I have always wanted to walk the Appalachian Trail, and so did little bits of it every time I visited. Bennington Vermont, to be precise was where I was based, with little classic dinners dating from the 30's, and white wooden houses down tree lined boulevards. The campsite I stayed at was run for fifty years by a wonderful family, and all of those there were so welcoming and I sat up around the fire talking with everyone from Texas to Florida. Once I had my fill of green, I would come back refreshed for the city.

Everyone associates the US with food, and justifiably so. Every avenue was packed with delis, restaurants, doughnut holes, pizzerias, almost all unique. New York largely has resisted the multinational food industry's steady march with most establishments being family owned and run. The exception being Starbucks of course, that was on virtually every street corner, but they provided free Wi-Fi, restroom and an iced coffee to combat the heat, all of which are a scarce resource in the Big Apple.

Through-out my time in the laboratory all those there were very helpful and informative, taking the time to explain their research and show me the best way to perform a tricky protocol. Once a week we had a lecture from someone on the floor, on their research, this ranged from Nano-technology to stem cells as well as world-renowned guest speakers coming in to the Hospital.

I also used the opportunity to network with US colleges out there, as I am considering pursuing a PhD in the US. I learned valuable information, which could only have come from face-face meetings. All of which will put me in good stead for when I start applying over the next few months.

In summary my time there was valuable in many aspects of my life. I got to experience living in a culture, and all its trappings. Working in a world class research laboratory and learnt that I can thrive where-ever I am dropped into. All of these lessons I will take forward into my PhD, and then on into my wider career in science.

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