

Reflective introduction

During the summer between my third and fourth year undergraduate MSci Pharmacology course at the University of Strathclyde, I was incredibly lucky to complete an internship under the supervision of one of my lecturers, Prof. Robin Plevin, and his PhD student, Kirsty Tinto. This was made entirely possible by the BPS vacation Scholarship award, for which I am extremely grateful. I was heavily involved with the planning of my project, where I was able to pitch my ideas to both Robin and Kirsty. This level of involvement continued throughout my project and has allowed me to improve my planning skills as well as undoubtably boosting my self-confidence. Additionally, this experience has given me a realistic insight into the day-to-day tasks completed in the laboratory. Initially, I was introduced to aseptic technique and cell culture and by week 8 I was completely independent when completing cell culture tasks. I then had the opportunity to use these cells for several techniques, including immunofluorescence, Western blotting, SiRNA and even some RT-qPCR. Completing biological replicates using these techniques has allowed me to become increasingly confident in the lab as well as allowing me to become more independent and expand my practical skillset. This has helped prepare me for my 4th year project next semester, as well as any research opportunities in my future career.

During my project, the whole laboratory was faced with a major western blotting problem, and I was involved in the troubleshooting process. I have not viewed this as a hindrance to my project, instead this has provided me with a realistic experience which forced me to exploit my problem-solving skills. Additionally, I was able to carry out optimisation of a membrane marker which my supervisors had not used previously for immunofluorescence. This also gave me an insight into the processes required before a successful experiment, something which I had never fully considered. These two experiences have shown me the reality of being a researcher and that an investigation is a lot more than what is published in a paper. Furthermore, I have met a huge number of other students and academic staff. This has given me the opportunity to hear their expertise in different areas, which has been eye-opening. For example, completing Western blotting with Prof. Plevin who is highly experienced, receiving advice on immunofluorescent staining from Dr Margaret Cunningham and observing Prof. Gwynn Gould to understand the subcellular fractionation process before completing this with U2OS cells for my project. Without this help, I would've struggled to achieve as much as I did in only 8 weeks.

I also learned how to use both ImageJ for image analysis and GraphPad Prism for graphs and statistics. Using my results I was able to create this report, which has allowed me to

advance my writing skills as well as learn to enjoy writing. Overall, this experience has been extremely valuable and enjoyable, and the welcoming environment of Prof. Plevins lab and Kirsty's dedication has allowed me to make mistakes and learn from them. Ultimately, this has allowed me to improve both my practical and analytical skills, as well as motivating me to pursue a career in the research industry and now even consider doing a PhD.