Emily Rose Hepburn

I applied for the Rani Rawji Studentship, generously funded by the JSPS Studentship scheme, because I wanted to get some research experience and had enjoyed the wrote learning of first year medical. The studentship offered opportunity to work with some amazing researchers at the forefront of medicine, and so I truly thought it would be an experience that could open so many doors and take me so far both inside and outside of medicine.

I had the most amazing 6 weeks at the UCL Cancer Institute, it was everything I'd hoped it would be and more. My project supervisor was in regular contact with me giving me advice on both my project, and on other projects I could see and be involved in within the lab. My day-to-day supervisor was friendly and encouraging in everything I did. She also gave me the opportunity to witness and be involved in other projects she was a part of, adding to the experiences and skills I gathered from the studentship.

My main project was working with solitary fibrous tumour, a rare soft tissue tumour. The overall goal is to better risk stratify patients with solitary fibrous tumour, as although this is a primarily benign tumour, a proportion can display more malignant features such-as necrosis and metastasis. The current WHO 3-tired stratification system can struggle to prognosticate accurately, and as patients whose tumours have these malignant features are more likely to have worse outcomes, it is beneficial to have an effective risk stratification system.
Evidence has suggested that a specific mutation in *hTERT* could correlate with malignant features, and so screening for the presence of this mutation could be one way to improve risk stratification and prognostication for patients with solitary fibrous tumour. To screen for this mutation, DNA from solitary fibrous tumour samples needed to be screened for the mutation, using droplet digital PCR. My role in this project was to optimise the DNA extraction process from patient samples of solitary fibrous tumour, to ensure a sufficient quantity of high-quality DNA was obtained. Due to the high fibrosity and varied cellularity of samples, the standard extraction protocol wasn't effective, and so experimentation was required to optimise the process, such-as altering volumes of digestion reagents and times of incubations, as well as the amount of sample starting with. Through varying a range of factors, an optimal protocol was devised.

This opportunity also showed me the financial aspect of research, that I had never really considered until now, such-as applying for grants, budgeting for each section of the research and the equipment/kits required and balancing cost vs quality were all parts of a researcher's career that I hadn't thought about much, and it was extremely useful to see.

I met truly inspirational people, saw truly inspirational work, and was inspired myself to pursue a career in research. I grateful beyond words for the JSPS Studentship scheme, as it allowed me to explore research and gave my opportunities I otherwise wouldn't have had.