Elective Prize Report - Summer 2015
Alexandra Robinson

I am a final year medical student at King's College London and received an elective research grant from the British Association of Dermatologists in the summer of 2015.

How the intricate molecular basis of disease manifests itself systemically is something that has fascinated me since starting my first degree in Biochemistry and continues to do so as I progress through my clinical years of medical school. When planning my elective, I decided not to travel abroad but to stay in the UK and pursue my research interests. I greatly enjoyed my experience of dermatology during my third year of medical school. However, time was unfortunately very limited and I was keen to explore this area of medicine in more depth. Throughout medical school we are constantly changing from one specialist area to another, so I wanted to spend a significant amount of time focusing on one specific area which would be a luxury! This led me to spend my 8-week elective period carrying out a research project within the Genetics and Molecular Medicine division of St John's Institute of Dermatology at Guy's Hospital in London.

I spent two months working within the 'Antibodies for Cancer' translational research programme under the direct guidance and supervision of Dr Sophia N Karagiannis. This group specifically focuses on conducting cutting-edge pre-clinical functional analysis of novel IgE antibodies for the biological treatment of melanoma skin cancer and other solid tumours, particularly ovarian. During my time here I was responsible for my own research project, which contributed to the lab group's ongoing research studies. I developed and optimised an enzyme-linked immunosorbent assay in order to measure the concentration of a novel biomarker, folate receptor alpha, in cancer patient blood. I found this biomarker to be of significantly higher concentration in cancer patients than healthy volunteers and additionally a higher concentration in the blood of patients with more advanced cancer. Additionally I found the concentration of folate receptor alpha to fall in the blood after chemotherapy treatment. These results allowed me to propose that folate receptor alpha levels could indicate response to chemotherapy treatment and to monitor the burden of disease. This data is now being used by the research group to analyse the levels of folate receptor alpha in those patients who may be suitable for folate receptor alpha-targeted immunotherapy.

I was delighted to be asked to give an oral presentation on my research at The Christie International Cancer Conference in September. It was a nerve wracking but very fulfilling experience! I was glad to see my data stimulate discussion among students and experienced Doctors alike. This was a fantastic way to conclude my time at the St John's Institute of Dermatology. My data has since been presented at the National Cancer Research Institute Cancer Conference in November, for which I am very proud.

My elective project was a fantastic experience. I would like to thank Dr Sophia N Karagiannis, Dr Debra Josephs and Dr Heather Bax for all of their advice, support and inspiration.

I enjoyed pursuing an area of Medicine I find very intellectually stimulating and immersing myself fully into the world of academic medicine. I am now determined that a career in which I can pursue research, hopefully in the field of Dermatology, alongside my clinical practice is for me. I am extremely grateful for the British Association of Dermatology research elective prize grant which gave me the opportunity to work in such a prestigious institution.