ICRR 2015 Kyoto report:

Working in DNA repair field I found the ICRR May 2015 Kyoto highly relevant.

I joined Dr. Tim Humphrey's lab as an MSc student in March 2012 and was able to continue my research studies having won CRUK and Clarendon studentship research awards. During this time, my research project has been to develop novel technology to detect mutation frequencies and signatures in response to DNA double-strand breaks (DSBs) in different genetic backgrounds. DSBs are the most lethal radiation-induced lesions in response to which cells employ either the error free homologous recombination (HR) repair pathway or error-prone mechanisms, such as non homologous end joining (NHEJ) and micro homology mediated end joining (MMEJ).

Using the novel genetic technology I have shown that DSBs induce a 10,000 fold increase in the frequency of mutations. Further, I have exciting data as for the interplay between HR and MMEJ pathways in human cells. This work has been going from strength to strength and I received a poster prize award for my work at the National Cancer Research Institute (NCRI) conference in Liverpool (November 2013). Moreover, part of my work has been published in 'Cell Reports, June 2014'.

Having won the ARR SIT travel award, I was able to attend the ICRR conference in May where I was given the opportunity to give an oral presentation. I also benefited from learning about recent advances in radiation oncology field, as well as receiving constructive feedbacks on my work from the experts in the field and keeping in touch with my ex-colleagues in Japan as well as building new networks for her future career. I would like to thank the ARR committee for the generous award and look forward to the upcoming ARR events and awards opportunities.

Sara Ahrabi