Imperial College School of Medicine

Clinical Research and Innovation

Research Project in Khon Kaen, Thailand

20/05/2018 - 09/06/2018

As part of Imperial College School of Medicine's new second year module 'Clinical Research and Innovation' (CRI), twelve lucky students were selected to be part of the overseas research experience to Khon Kaen, Thailand. Between us we were going to undertake four small research projects focused on cholangiocarcinoma, the highest prevalence of which is found in this area of the world. The course consisted of multiple teaching sessions about research design, appraisal and statistics, before the research experiences themselves were undertaken, lasting around three weeks. Following this, students produced scientific posters of their research and results, which were presented in an examination and as part of Imperial College's Festival of Science.

In the run up to leaving for Thailand our students were kindly invited to attend AMMF's annual conference. This was an extremely informative experience for us all, giving us a good overview of the many angles and areas of research that are currently being investigated to help diagnose and treat cholangiocarcinoma. More importantly perhaps, there were two extremely moving talks from the patient's perspective of cholangiocarcinoma, which really resonated with all the students and focussed them on the importance of awareness of and research into this disease.

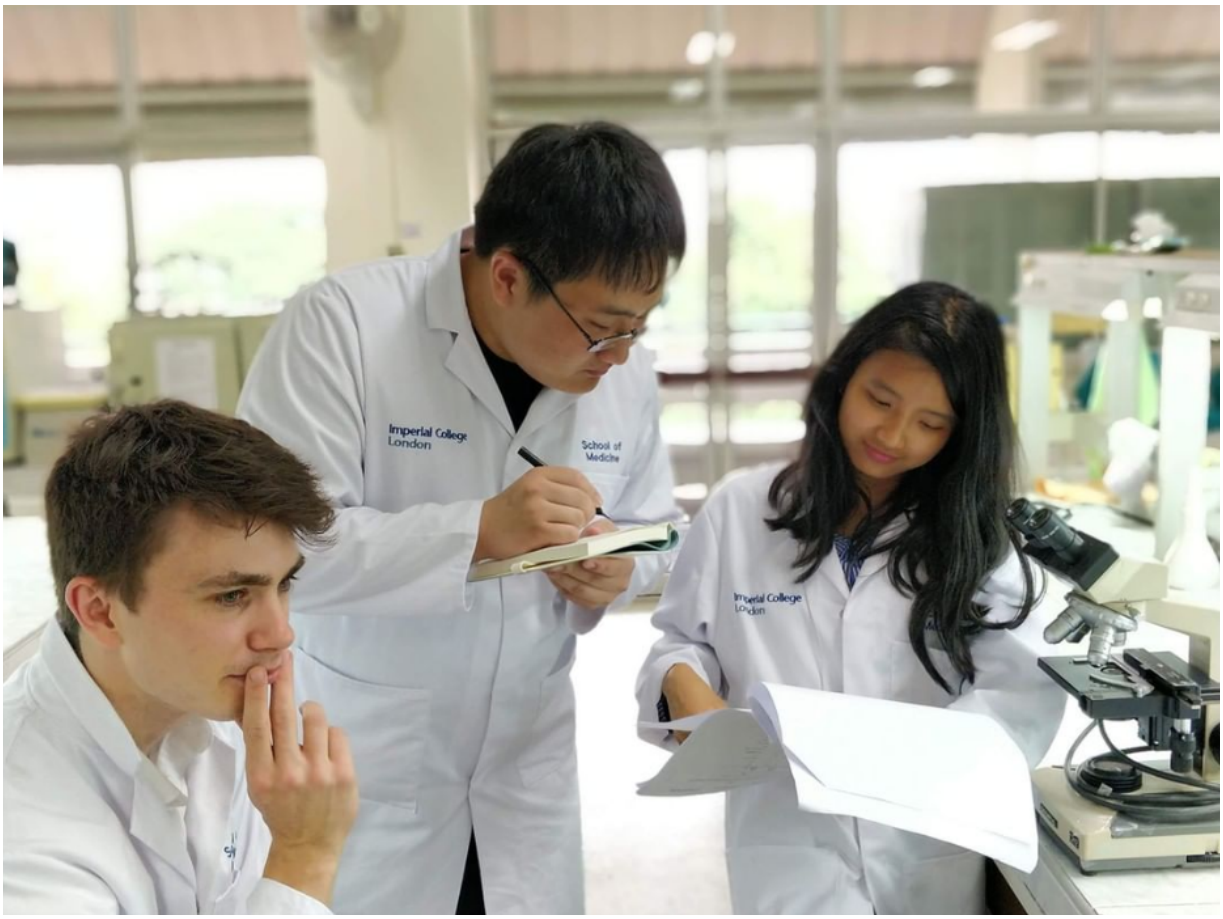
Soon it was time to depart. After a long journey we were very warmly received by our hosts at Khon Kaen University and introduced to the team we would be working with for the next weeks. We were based in the Department of Biochemistry, in a lab closely connected to CASCAP (The Cholangiocarcinoma Screening and Care Program).

Cholangiocarcinoma is very highly prevalent in Northeast Thailand, as it has been linked to a parasite that can be contracted from fermented or raw fish dishes – a popular and culturally important part of the local diet. As a result, CASCAP was set up to screen large amounts of people for this disease, in

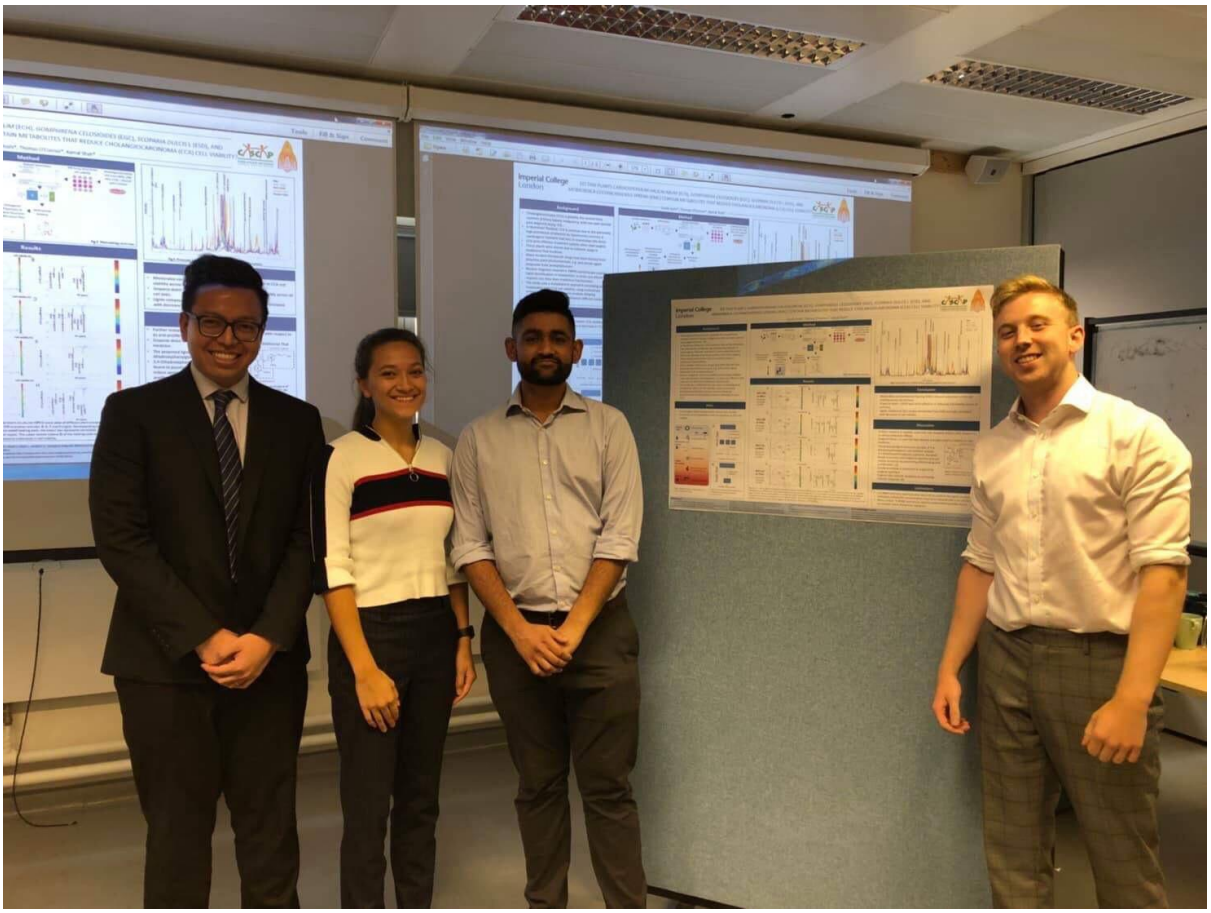
an effort to diagnose and treat as many people as early as possible, and to learn how best to tackle this very large-scale problem.

Our first week was spent learning about the biological, biochemical, and socio-cultural elements of this complicated system of culture, infection and cancer, well as learning about what the university and CASCAP are doing to tackle to problem in all areas. This involved having talks from multiple highly-regarded academics, going into the field to see the areas more affected and to talk with the locals, seeing how screening is carried out and tracking the movement of parasite from egg to fish to person.

Once we were fully loaded with information, we split into four groups, to carry out four different research projects supervised by PhD students from KKU. Different projects focused on different aspects of the management of the disease – from diagnosis to treatment. During this time, we collected and analysed our data, then used our results to make scientific posters and presentations. To do this many of us had to learn new skills, from using microscopy to diagnose parasitic infections, to biochemical techniques such as western blot or PCR, to using coding software to analyse and condense graphical data. We presented the results professors at KKU and were given excellent feedback, in a scenario much like a thesis defence. Just before leaving, we also had the chance to give a conference style talk to over 100 first year nursing students, thanks to Ajarn Earmporn. Here we discussed the importance of stepping out of your comfort zone and learning in unexpected ways in order to become the best health care practitioner you can.



Sadly, it was soon time to leave. We had all made lots of friends, and learnt a lot about science, research, cholangiocarcinoma, and the culture of Northeast Thailand. However, it was time to finish our projects. Over the next two weeks we worked hard to hone our posters and presenting skills, before presenting them to Imperial College Academics in our final exam of the year. That afternoon we also presented them at the Imperial College Festival of Science, along with all of the other Clinical Research and Innovation projects from that year.



The experience was an amazing and informative one, and we would like to thank the people that made it happen. In particular this includes Dr Narong Khuntikeo, Professor Paiboon Sithithaworn, Associate Professor Bandit Thinkhamrop, Associate Professor Watcharin Loiliome, Dr Anchalee Techasen, Ms Kanokporn Hintao, Dr Earmporn Thongkrajai and all of the members of Lab BC6 from Khon Kaen University, Helen Morement of AMMF, and Professor Simon Taylor-Robinson, Professor Mary Morell, Dr Sohag Saleh and Jo Williams from the Imperial College team.