

## JSPS London – Short Report

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In summer 2015, I worked in the Department of Medical Physics and Engineering at Osaka University, as part of the JSPS summer programme. In the lab of Professor Kimura and Emeritus Professor Fujiwara, I conducted research into the study of lung function using hyperpolarised xenon-129 magnetic resonance imaging (MRI) techniques. The Osaka lab have developed procedures for preclinical MRI research using mice, whilst my PhD studies in Sheffield involve the translation of some of these developing MRI techniques into humans.

The plan of our summer project was to evaluate the efficacy of two proposed compounds to treat a mouse model of emphysematous lung disease, one of the commonest causes of death worldwide. Small animal disease models are an important surrogate for studying disease characteristics and progression, and can furthermore be utilised to validate new proposed treatments for a variety of debilitating diseases before consideration for human trials. Our preliminary results suggest that one of the tested compounds is effective to prevent and alleviate the symptoms of emphysema, and is extremely promising for application to other inflammatory diseases and potentially humans.

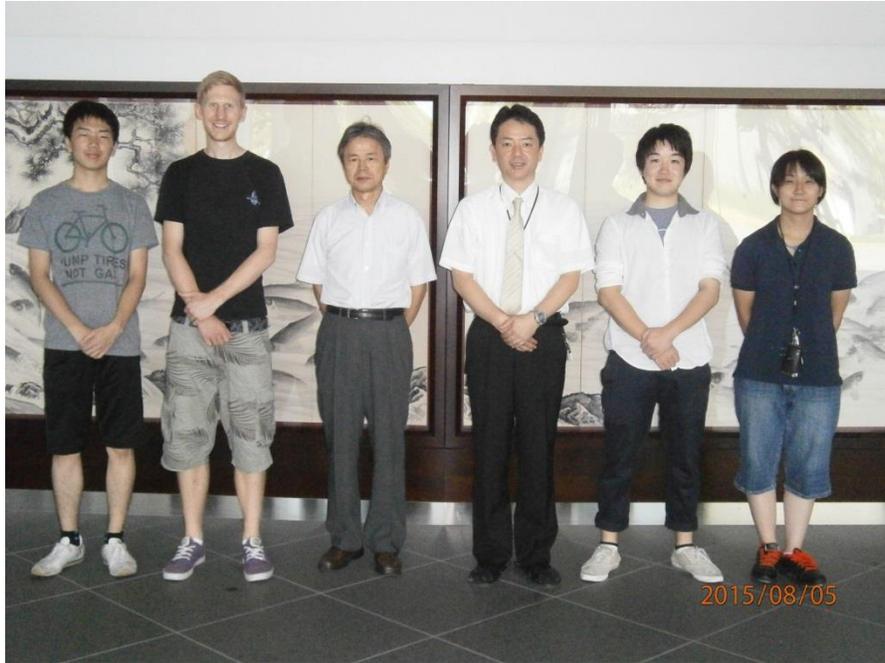
In addition to this project, I was able to inherit a Master's students' project during the summer programme, about which I have written a paper that is currently under review at an international MRI journal. Ongoing analysis is being performed in Osaka to solidify our findings and we will continue our collaboration.

I am immensely grateful to my host and colleagues in Osaka University, and to JSPS for providing me this fantastic opportunity. To any researchers embarking on a JSPS programme or thinking of applying, it is really a unique experience and a great way to develop yourself as an international researcher.

Some tips for researchers (thinking of) going to Japan:

- Approach your research with an open mind and try to benefit from discussions with people who may have a different way of thinking to yourself
- Present your own work and share your ideas, as well as learning from your group
- Be willing to work in a potentially unfamiliar workplace environment, and potentially different working hours to what you are used to
- Work hard, but don't despair if results don't work out, it will still be an incredibly useful experience
  
- Try and improve your Japanese (and be ready to read and correct your colleagues' English)
- Following the above, make Japanese friends! Japanese people are friendly, helpful and above all, hospitable
  
- Don't be afraid of feeling lost, or getting lost!
- But... explore the beautiful country of Japan and immerse yourself in its culture
- Prepare your stomach to be constantly filled with Japan's delicious food

Two photos from my trip:



*The everyday environment: Me and the lab group at Osaka University, with Fujiwara-sensei and Kimura-sensei in the centre.*



*The unique environment: Participating in the 2015 Awa-Odori dance festival in Tokushima.*