

BSDS Travelling Fellowship Report

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Two weeks in Italy on study leave sounds too good to be true.

I was very fortunate to be awarded the BSDS travel grant which made the above really happen. I had been interested in learning about the confocal microscope and prior to the fellowship application had been liaising with various world authorities on its uses. I had already been in contact with Professor Giovanni Pellicini in Modena and he had been very keen to welcome me to his unit to see it in action. The expenses incurred in the organisation of this trip were a little daunting so the fellowship application came along at a good time and made it ultimately more doable.

I flew into Bologna and prepared for my two weeks 6-17th June. I wasn't quite sure what to expect. Modena is a small city in Northern Italy rarely visited for more than a day by tourists and so English was very rarely if at all spoken and my Italian was non-existent. On arrival at the hospital on that first morning I was ushered off to a room. Dress code in the unit insisted on a white coat which I haven't worn in many years. The "bare below the elbows" policy certainly didn't seem to apply here and the dress code was "very casual and relaxed". It was common to see the registrars in trainers, jeans, flip flops whatever was comfortable. However the welcome was warm and welcoming despite my poor attempt at Italian. Google translate was heavily utilised. The doctors mostly spoke good English as all their academic articles are written in English but the technical and support staff rarely spoke any English at all which at times was challenging for both of us.

I realised quickly that often it was best to wait until they had written down their diagnosis or history as it seemed much easier to translate or at least make an educated guess at what they had written. It is surprising how medical terms are often fairly similar in whatever language.

The first week I watched how the unit utilised the confocal microscope in vivo. The unit opened at eight am and patients came routinely and regularly to have their moles checked. The health care system in Italy obviously differs so patients were paying for the screening themselves. From what I could work out approx. £45 per whole body scan. Good value for money I would have thought. The corridors at eight were littered with patients standing waiting their turn in the queue. They were firstly screened with a mole mapper. It was amazing watching how quickly the dermatologists would do these screens (obviously well practised) and every inch of the patient was examined and scanned between their toes, hair etc and all of these images were captured on a computer system. It also surprised me despite the darker skin type just how many moles the patients had. It began to look like a typical clinic back home. Any moles that were picked up at this stage as being worrisome were then scanned with the confocal microscope and a decision based on this imaging whether or not surgery was necessary. The scanning process with the confocal microscope took 5 mins or less was entirely painless. The patient lay on a bed, the microscope was focused and rested directly on the mole in question and the scan took place. Many lesions were scanned at this

stage and the patients reassured thus saving them unnecessary surgery. Every patient's images scanned were kept on file and the pathological correlation at the end matched with the confocal diagnosis. It was fascinating to see a piece of equipment in use which essentially acted as a virtual pathology lab and its use in avoiding unnecessary surgical excisions. At the beginning of the week everything was literally "shades of grey" to me and I wondered how long it would take to develop the expertise to confidently be able to say to the patient that they didn't need the lesion in question removed. However by the end of the week I was making my mind up before the technician told me their thoughts. I think with practise it isn't as daunting as it might first appear.

The second week was equally as interesting and I got an opportunity to see the use of the confocal microscope for Mohs ex vivo. Being a Mohs surgeon this was of great interest to me. The team were using the confocal microscope alongside conventional processing to check its accuracy. Again the time taken to process the specimens went from conventionally 45 mins to an hour to five or ten mins with the confocal microscope. The utility of this method is easily appreciated. This means the time between Mohs levels is significantly reduced. The eventual replacement of this method instead of conventional sectioning would also negate the need for a laboratory and would mean many more patients could avail of Mohs and have quicker surgery and repairs. Again it would take a number of months I would have thought looking at the confocal images to gain sufficient expertise to interpret the images but an utterly fascinating piece of equipment with so many uses.

The team at the University are also quite pioneering and are using the confocal microscope also to image inflammatory skin rashes. This would mean that instead of having to biopsy a patient with an inflammatory skin rash the rash would just be visualised with the confocal microscope negating the need for biopsy and surgery at all. One can appreciate how revolutionary this may be.

Modena itself despite not being on the "tourist track" was a beautiful and interesting city. I developed a new found love for Ferraris and classical music. Both Enzo Ferrari who was the founder of the Ferrari and Luciano Pavarotti were born in Modena. Enzo Ferrari's house had been converted into a Ferrari museum. I also had the opportunity to visit Pavarotti's house outside Modena. The memorabilia and pictures in this house were amazing. There were also many of his clothes and art work on display. He was a pretty good artist as well as an opera singer which I wasn't aware of! His charity work with the Pavarotti foundation was also inspiring. Modena also is very famous for its balsamic vinegar. I wasn't aware that balsamic vinegar was so complicated to make. It reminded me a little of Scottish whiskey. So many barrels rotated regularly and many years to make the finest balsamic vinegar. The tasting after the factory tour was interesting. The most expensive balsamic vinegar which can take many years to make was actually very sweet and would not have been what I would have imagined it would have tasted like.

The two weeks were utterly fascinating and I came back with a new found desire for research and development. It would be lovely to collaborate with some of the UK centres that currently have a confocal microscope to further explore its utility. I would be particularly

interested in further exploring its utility in the processing of the Mohs specimens. I have since my return been in contact with Dr Emma Craythorne in London and Dr Colin Fleming in Dundee to see if any further studies could be performed. I am aware that NICE are interested in further research on the confocal microscope and I would be very keen to explore this further. One of the hurdles that I will have to overcome is the price of the microscope itself. With the current NHS it is difficult to persuade the management to invest in a research tool which is as expensive and will initially at least slow up the Mohs procedure and will likely increase our wait for Mohs surgery temporarily at least. However, it is a piece of equipment that may likely revolutionize our whole dermatological practice.

I wish to express my sincere gratitude to the BSDS for allowing me to realise my aspiration to learn more about this fascinating microscope and I hope to be able to utilise my learning in the near future. I also wish to express my gratitude to Professor Pellacini and his team for allowing me to learn from their great expertise. I only hope that I can use my knowledge in the near future.