With the support of the Nephrology Section, Royal Society of Medicine, I attended UK Kidney Week 2017 in Liverpool. This was truly a mix of high quality science, the latest evidence-base of clinical guidelines and therapeutic directions while featuring international experts presenting world-class research. The meeting was also the first of its kind, held jointly between the Renal Association (RA) and the International Society of Nephrology (ISN).

I was invited to present my work in the ‘3 minute hero’ session hosted by Kidney Research UK. This was a fun, interactive session allowing early researchers to present their work. I presented the work of my PhD research project where I have tried to dissect the mechanisms of granuloma formation in anti-neutrophil cytoplasmic antibody (ANCA)-associated vasculitis.

ANCA are associated with a severe form of small vessel systemic vasculitis, in which they target two specific auto-antigens, proteinase-3 (PR3) and myeloperoxidase (MPO) found within neutrophils and monocytes. Granulomatosis with polyangiitis (GPA) and microscopic polyangiitis (MPA) are the main clinical syndromes, both characterized by kidney and lung disease, but granulomatous inflammation is almost exclusively found in GPA, and unlike other manifestations, remains difficult to treat. In GPA patients, PR3 is the predominant ANCA auto-antigen and neutrophil membrane PR3 expression is increased. There has been limited understanding of why granulomata are restricted to this patient subgroup. I presented my investigation into the role of PR3 in driving giant cell and granuloma formation by generating a novel in vitro model, as I have shown that it is the persistence of PR3 in a specific subgroup of ANCA-associated vasculitis patients, that drives granuloma formation. It was beneficial to receive feedback on my research, giving me new ideas and areas I have yet to pursue.

The opening plenary session on acute kidney injury (AKI), co-sponsored by the International Society of Nephrology, was a highlight of the conference. There was a blend of the real-life challenges facing developing countries tackling AKI as well as novel insights provided into immune mechanisms of AKI, beyond parenchymal renal disease. In addition, the ISN
sponsored debate asking the question whether investing resources in dialysis in a global scale is a distraction was a thought-provoking session.

Attending UK Kidney Week 2017 was definitely in keeping with the purpose of the Nephrology Section as it certainly improved my knowledge and understanding of nephrology and has kept me up to date with current issues.
I attended the UK Kidney Week in Liverpool this year, with the kind support of the Royal Society of Medicine, Nephrology Section Bursary. My aims for attending the conference were two-fold.

Firstly, I presented my latest research on the use of isolated kidney fibroblast cells to screen for drug targets in progressive chronic kidney disease, the most significant problem facing nephrology community today. I presented 2 posters on this research, which demonstrated that certain drugs, originally discovered as anticancer treatments, can prevent experimental chronic kidney disease. I received useful questions and feedback and met with another scientist working in a similar area, who I now hope to collaborate with as a result of attending the conference. Further work will examine whether other similarities exist between cancer cells and activated fibroblasts.

Secondly, I attended (and tweeted about!) the numerous lectures that were relevant for my everyday clinical practice. My particular highlights included access to transplantation, fibrosis and regenerative medicine, and newer pharmaceuticals such as the SGLT2 inhibitors. Finally, it was a privilege to see so many networking nephrologists, encompassing both the more experienced and the younger clinicians (such as Edwin Wong, Raine Award winner). I took inspiration from their dedication and contribution to Nephrology. I want to thank the Royal Society of Medicine for their support in attending such as superb conference, organised by the Renal Association.
An outstanding conference held at a great venue combined with the sunny weather lifted everyone’s spirits. The 2017 UK Kidney Week was a high level educational meeting that enabled the multi-professional attendees to keep abreast of developments in clinical practice and cutting edge scientific development. The scientific programme consisted of 25 symposia, organised in three parallel sessions throughout the 3 days of the conference.

The high educational value of the conference was highlighted in a number of excellent talks from the UK’s most authoritative and respected key opinion leaders in the field. Though it is really hard to select between the over 100 speakers across a diverse programme and parallel sessions, my highlights include the Quality improvement session on KQuIP, home therapies and access to transplantation, the 21st century communication highlighting the power of social media in communicating unmet patient needs, and the education and research ISN joint session on global differences in access to renal replacement therapies and acute kidney injury treatments. Other sessions of great interest included the key role of magnetic resonance imaging as a tool to detect renal fibrosis and identify patients at high risk of progression. There were excellent talks on the new insights on SGLT2 inhibitors which appear to have pleotropic effects and are very promising agents not only for diabetics but also for non-diabetics with CKD. The updates on the SPRINT trial and its implications on patients with CKD and the current state of anti-coagulation in renal patients with atrial fibrillation are useful for practicing nephrologists. Interesting aspects were discussed in the sessions highlighting the management of AKI in low income countries and the risks following living donation.

There were updates on the huge number of coming clinical trials in the UK including DAPA-CKD, NEPHSTROM, NURTuRE-CKD, BISTRO, CREDEENCE, CANVAS and the ongoing studies including PIVOTAL, P-DOPPS, PD-CRAFT, CUDDLE, STOP-ACE which for sure will lead to practice change in the near future.

The talks were lined up with an exhibition of over 300 posters covering a variety of nephrology topics and a number of industry symposia being presented throughout the meeting which perfectly complemented the main programme.
Last but not least, an exciting social programme was lined up, the highlight of which was undoubtedly the Kidney Research UK charity 5k Fun Run. More than 70 delegates (approximately 10% of the conference attendees!) took up the challenge to run along the Liverpool Docks and were supported by an enthusiastic crowd led by Prof Feehally. This was followed by the Renal Association Presidential Address at the ACC exhibition area in a relaxed environment which included drinks and nibbles. Finally, the Conference Dinner took place in an impressive venue with panoramic views over the Mersey and gave the opportunity to delegates to enjoy the atmospheric backdrop while networking with colleagues.

Following the completion of the UK Kidney Week in Liverpool, which will be remembered as one of the most successful conferences over the recent years, we look forward to the next year’s Kidney Week in Harrogate, which I am certain that will exceed our expectations.
I attended UKKW in Liverpool in June 2017 with the following objectives

1. Present my two posters
2. Meet with colleagues from across UK who have a particular interest in cognition and the renal-brain axis. This is the subject of my PhD.
3. Learn and expand my renal Knowledge

I presented 2 posters. The first poster reports on a collaborative quality improvement project targeting primary care acute kidney injury. I demonstrated the profound impact that e-alerts, which accompany an AKI triggering blood test result, have upon the response time to a repeat blood test or an admission to hospital. I also demonstrated how an educational outreach programme also reduced response time. The results also propose there may be an improvement in the AKI mortality as a result of this work. My second poster highlighted the complication that cytomegalovirus infection has in patients heavily immunosuppressed patients with ANCA Vasculitis.

I had the pleasure of meeting Mark Findlay who is a PhD Student in Scotland. He presented data from an amalgamation of 4 different Scottish registries that demonstrated a tenfold higher incidence of stroke in dialysis patients than background incidence. In addition to traditional risk factors, higher serum phosphate and lower body weight were extra risk factors for stroke in haemodialysis patients. Less than 50% of haemodialysis patients who suffer stroke survive after 1 year. He also presented work that showed that cerebral blood flow is reduced when patients are on haemodialysis and that blood flow and cognition are related to ultrafiltration volume. All this work will help me in the design and development of my PhD.

Other learning included:

- Bioimpedence can be used to identify increases in extra-cellular water relative to muscle mass as haemodialysis patients lose muscle mass due to comorbidity and inflammation.
- Patient level analysis of outcomes of dialysis patients who are fluid overloaded are open to bias. E.g. Patients who are fluid overloaded may be sicker and develop fluid overload more easily or sicker patients may be kept overloaded to maintain BP.
• DOPPS study survey results from 269 HD units demonstrate that units which use sodium profiling have worse CV events and all-cause mortality whereas those units which use cooler dialysate have improved outcomes. This only shows association.

• SGLT2 inhibitors may ameliorate CKD progression. A randomised study is ongoing (DAPA-CKD)

Many thanks to RSM for supporting me

James Tollitt