**Himanshu Kaul, School of Engineering (31.05.22)**

I am Dr Himanshu Kaul, I am a Royal Academy of Engineering Research Fellow at the School of Engineering and also the Department of Respiratory Sciences. I’m based in the Michael Atiyah building, and my bench space – my lab – is in the Maurice Shock Building.

In terms of interdisciplinary research, I have chiefly focused on working with clinicians and other respiratory scientists, so for example, one PhD student that is currently working with me, and we are looking into generating what are called lung organoids, and this is in collaboration with Professor Yassine Amrani, who’s the head of Respiratory Sciences. I’m also working with Dr Bibek Gooptu, who is a clinician, and also with Dr Chris Brightling, who is also a physician, and the aim of the work there is to develop an in silico model of asthma patients, so a) we can understand the disease mechanisms from a personalised perspective at an individual level, and secondly come up with strategies that are tailor-made for people rather than a one-size-fits-all approach.

My expertise is in biomedical engineering and in computational biomedical engineering, so I tend to use a lot of computational methodologies, you know, programming tools, to create my in silico models, then there is cell culture-based work, which is essentially biological principles, bio-engineering principles, trying to understand how cells work with each other during development or during disease, and using that knowledge to create something useful for society. And, I mean, obviously there is core engineering principles, because we are trying to at the end build widgets and apps that people could use, and finally, obviously, the clinical knowledge that comes from partners – I’m not a clinician myself, but other collaborators bring in that input, so it’s a convergence of a lot of these disciplines and principles that make the work possible.

You need to be with like-minded people, because – you need to be with people who also embrace the idea, because it’s a tough journey, it’s not going to be easy, and while there may be enthusiasm at the beginning, I think as you begin to explore projects you do end up with these issues regarding language, other issues where things may not translate from one field to the other, so you will have to come up with newer concepts, and that’s what’s exciting about this, but also that is exactly what the barrier is!

Typically, if I’m walking, I’m walking around Victoria Park – and I can see that from my window, because I’m conveniently positioned – one of my colleagues, Professor Sarah White, I once had a meeting with her – a walking meeting with her – and this was in the cemetery. I thought that was very stimulating, and also quite grounding as well in many ways.