**Martha Clokie, Department of Genetics and Genome Biology (10.06.22)**

My name is Professor Martha Clokie, and I’m based in the Medical Sciences building here at the University of Leicester.

I run a research group focused on trying find new ways to kill bacteria that are resistant to antibiotics. One way to do this is to use another natural enemy of bacteria, which is called bacteriophages – viruses that specifically infect and kill bacteria. So, I run a team of about fifteen people; we work on different aspects of bacteriophages, and we go right from their discovery to actually making products that doctors and vets will use, but it involves working with all sorts of people to get from that stage of discovery to actually having products.

A lot of my work is interdisciplinary – probably my biggest bridge that I had to cross, but one of my major highlights, was working with Liz Jones. She is based in the School of Arts, and her research focuses on how culture impacts our perception. So I’ve worked with her because I am trying to find bacteriophage-based products to treat bacterial infections. Now, what we do not want to do is get to a situation where people are scared of the viruses, so we’ve been working together on the concept of ‘virus fear’ – are people going to be scared, will they actually be receptive to this project? Because in some ways, there’s no point in spending years developing a perfect product that you know works really, really well if there’s a huge backlash against actually using it, so I’ve been working a lot with her to try to understand these impacts.

To go from actually finding bacteriophages to having a product requires working with all sorts of people – so I’ve had to work, for example, with structural biologists and biochemists to try and understand exactly how bacteriophages work. So – the first thing we do before we develop a phage is to look at the genome, so we work with molecular biologists [as a] way to do that, and then when we observe interesting properties of the phages, that’s why we work with the structural biologists. Then actually to get a product to market requires people who understand how to do things, for example how to regulate a product, how to formulate a product, and again that’s different, separate bodies of people that we’ve worked with. So we’ve worked with lots of different companies – I’ve worked with tiny company start-ups, and I’ve worked with large companies with turnovers of a billion dollars a year.

I would say none of my multidisciplinary collaborations have been instant; you really have to be really open and prepared to work at it a little bit, to learn the common language and to teach the other people your language.

I tend to fall out of my office and stumble into Victoria Park. It’s absolutely beautiful – I know parts of it – it nestles really well with the campus, and there are various academics who have influenced some of the policy in the way that it’s managed at the moment, so there’s lovely big swathes of un-mowed plants at the moment for example that are really beautiful. I sometimes think that in terms of memories per square inch, I’ve got more in Victoria Park than anywhere else! Because if you walk round the park – I often have thoughts like, ‘Oh, that’s where I had the idea to do this experiment, or put that bit together’, so I find having that park on our doorstep is just really special and lovely.