

Medical Research Council Facility Trip, Oxford

On 23rd February, 15 6th formers were invited to the MRC facility for the day to experience life in research laboratories and to visit the Mary Lyon Centre.



Students were given a tour of the laboratories and were able to see processes like gene 'knock in' and 'knock out' and genetically modified stem cell use in action. Yr13s are currently studying gene technology and were able to see PCR machinery for real and appreciate the high throughput achieved by automation. This technology revolutionised the human genome project and took years off the estimated completion date. A working lunch looked at how behaviour

video and recognition software were revolutionising disease detection. The concept is that e.g. in Parkinsons, much earlier detection through subtle behavioural changes could create a window to apply early therapies to delay more serious symptoms and disease progression. Visiting the Mary Lyon Centre required specialist clean clothing and adopting practises so that we did not contaminate the area. The air shower was a unique experience!



"It was a pleasure to have visited the Mary Lyon Centre at MRC Harwell. With the technology required to perform processes like phenotyping and genotyping, it was astonishing and it truly demonstrated how genetics have a role in an organisms development. For instance, looking at the machinery and technology that was used to show how genes can be put together in order to achieve a specific characteristic. Additionally, the technology involved in PCR testing which was crucial to our fight against COVID-19 and its use for biometric identification when trying to identify criminals for example was incredibly fascinating. This visit has truly inspired me into the world of medical research. "

"Currently studying the topics of DNA, genes, chromosomes and genetic diversity in Year 12- It was fascinating to see first-hand the future of genetic research for the use of studying

human diseases and not only apply my growing knowledge to the activities provided but also stretch my current understanding to a more advanced level. Apart from the air showers and welcoming muffins on our arrival, my favourite part of the day would have to be seeing the germ-free mice at the facility that are currently being used to study the effects of microbiota in living organisms. But of course, at the end of the day also hearing about who the centre was named after in recognition of her achievements- Mary Lyon. It was inspirational to learn of the history of her academic strides during a time of inequality for women in the world of science. Despite these challenges, Mary went on to study Physiology, Zoology and Biochemistry at Girton College, Cambridge and became one of the foremost geneticists of the 20th century. Our visit to the Mary Lyon Centre at MRC Harwell was truly a privilege and an invaluable opportunity. I'd like to give my thanks to all involved with the day for giving up their time and efforts to make our experience the best it could be."