

## **Stevenson Funded research stay at Paris Saclay University - Lily Peck**

I am completing a PhD through the Grantham Institute's "Science and Solutions for a Changing Planet" doctoral training partnership at Imperial College. Between February and April 2022, I spent three months at Paris Saclay University thanks to the Stevenson Fund. This placement gave me an extremely productive three months working, as well as lots of career development and new research ties between the two research institutes.

I completed my undergraduate and research master's degree in Biology at the University of Sheffield, which was where I started working on plant pathogens (disease-causing organisms). I then worked for four years in agriculture at Sainsbury's Supermarkets, broadening my experiences from pure research, and completing an Agrifood MSc whilst working full-time. Then in 2018, I returned to the research world and started my PhD looking at the evolution of fungal plant pathogens.

My research placement supported by the Stevenson Fund was at Paris Saclay University, which is a renowned University worldwide for life sciences. I was working within the Evolutionary Genetics and Ecology (EGE) group, where Tatiana Giraud is the group lead. She has recently been elected as a member of the French Academy of Sciences. She and her group have extensive knowledge and experience working with different fungal species and the emergence of new plant pathogens. They are pioneers in using comparative genomics to obtain new perspectives on the mechanisms of adaptation, being the first group to sequence a eukaryotic (multi-cellular) genome to chromosome level.

During my stay at Paris Saclay, I worked closely with the EGE group, learning new techniques to analyse different types of evolutionary change across fungal genomes. In particular, I was able to provide more convincing evidence towards recent and adaptive horizontal gene transfers, whereby genetic material is not exchanged between parent and offspring but between species co-inhabiting the same niche. I also started work on a new area for me, and one of the EGE groups main research areas – cheese-making fungi. When in France...!

Throughout my stay I formed new connections with different members of the EGE group. They are an incredibly welcoming and friendly group and I feel lucky to have been able to work so closely with Tatiana and everyone else for three months, not to mention enjoying the fine French cuisine every day for a subsidised lunch at Paris Saclay. I am now working towards publishing my new data, and this experience has shown me how valuable international collaboration can be in producing high quality research.

