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School of Chemistry at the University of Edinburgh, and unique,’ says Professor Julien Michel from the ‘This PhD programme is genuinely ground-breaking UK.

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chemistry; and structural biology. During this initial period, participants are affiliated with the University of Edinburgh.

Students then carry out a short research project aimed at shaping their full PhD proposals for the three years ahead. At that point, students’ academic affiliation transfers to the home institution of their external supervisor. They also have at least one supervisor at the Franklin, where they will be based for the vast majority of their PhD.

The portfolio of projects available to students to choose from is very rich,’ says Professor Michel, ‘as is the range of experts they can work with. That would be hard to find anywhere else in the UK, and we hope this depth of training and opportunity will help our graduates go on to achieve great things. The Franklin’s ambition is to break barriers between disciplines – that’s certainly something that students on the PhD programme can benefit from.’

Lindsey Spriggs, the Franklin’s Early Careers Lead, says: ‘Our students have the opportunity to be part of exciting, impactful research. And the nature of the programme means we’re hopefully developing students who have a real dynamism and the agility to work across different disciplines, which will stand them in good stead for their future careers. The cohort system is also really valuable, giving the students a community around them and a sense of solidarity.’

It’s this combination of features – the immersion in different scientific themes, the cohort system, the crossdisciplinarity, the network of university partners – that makes the Franklin’s PhD offering unique.

Professor Michel says: ‘The programme is aiming to do something really ambitious: to accelerate the development of scientists through training and by enabling them to plan their own research projects, so that they will be more advanced in their thinking and approach than you would expect from people so early in their careers.’

Lindsey adds: ‘At end of the initial training and rotation period the idea is that participants will have an understanding of the different project options, how they could be developed, and who they might be able to develop them with at the Franklin. They can take that kernel of a project idea and put their own stamp on it. That’s quite unusual for science PhDs.’

By the time the third cohort starts in October 2023, there are expected to be around 30 PhD students based at the Franklin, at various stages of development. Early feedback from participants in the first cohort suggests they value, in particular, the variety of the themed rotation and the sense of community brought about by being part of a group.

Lindsey says: ‘We’re continuously trying to improve the experience for future cohorts based on feedback from our current students, who have been fantastic to work with. For example, in the coming year we’ll reduce the individual rotation periods from two weeks to one week, freeing up time for other aspects of the training. It’s really important to me to make sure the programme functions like a well-oiled machine, that expectations are met, and that students feel a connection both to the Franklin and to their university.’

Professor Michel adds: ‘It’s important to acknowledge that introducing a new, innovative way of doing things does bring its challenges. But I think this model, which is reinventing the way universities and independent research institutions work together on doctoral training, is going to prove very successful.’

Launch of the Franklin PhD programme provides ‘unique’ training and development opportunities for early-career scientists

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ty PhD students are benefiting from access to the Franklin’s world-leading technologies and researchers as part of our innovative doctoral training programme.

The first cohort of ten students joined the Franklin in October 2021, embarking on research projects spanning topics as diverse as stem cell models of neurodegenerative disease, antiviral defence in bacteria, improving the resolution of cryo-EM ptychography, and chromatin reprogramming.

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Funded initially for three cohorts by UKRI-EPSRC, the rolling four-year programme combines exciting research with high-quality scientific training and operates in partnership with universities around the UK.

‘This PhD programme is genuinely ground-breaking and unique,’ says Professor Julien Michel from the School of Chemistry at the University of Edinburgh, the Franklin’s primary university partner for the programme. ‘The idea behind it is that you’ve got this fantastic building, cutting-edge equipment, leading scientists – it would be a great environment for training doctoral students. And it made sense to partner with a university because you need that not only to provide the academic accreditation but also for the prior experience and skills of running successful PhD programmes. That required a lot of careful planning and discussion though as it’s such an unusual model.’

For the first three months of the Franklin’s PhD programme, students receive training in key areas including intellectual property, statistics, research ethics, EDI awareness, and critical analysis of scientific literature. That’s alongside rotational immersion in each of the Franklin’s five scientific themes: artificial intelligence and informatics; biological mass spectrometry; correlated imaging; next generation chemistry; and structural biology. During this initial period, participants are affiliated with the University of Edinburgh.

Students then carry out a short research project aimed at shaping their full PhD proposals for the three years ahead. At that point, students’ academic affiliation transfers to the home institution of their external supervisor. They also have at least one supervisor at the Franklin, where they will be based for the vast majority of their PhD.

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