

A UROP perspective by Edward Bird

Summer 2023 (undertaken in the Department of Chemistry)

Edward was a year 2 undergraduate at Imperial College London in 2022-2023: MSci Chemistry, Department of Chemistry.

UROP title: Identifying, synthesising, and testing a fragment-based molecule against a target involved in anti-microbial resistance

Getting the opportunity to do a UROP in the field that I find most interesting was a great experience that has definitely changed my perspective on research. I decided to pursue a UROP after a conversation with one of my professors led me to an academic in my department, whose research area lined up very well with my interests. My particular area was in drug discovery, something that is usually quite hard to get experience with, but after a few discussions, my new supervisor and I settled on a plan that would allow me to explore drug discovery using some incredible software and resources that I would otherwise not have access to. My project was very independent which gave me the freedom to explore the area on my own, overcoming any issues I ran into, and experimenting with different methods and ideas. This was also combined with excellent supervision which came in the form of personalised advice and guidance whenever I needed it.

For the UROP itself, no preparation was required. The UROP's goal was to learn and experience a condensed version of modern fragment-based drug discovery, and while my supervisor sent me some papers to review or reference, most of the learning was done by using the software and actively doing the drug discovery process during the actual UROP time. I gained a huge amount of knowledge in the area from all of this, but I also got a feel for how an MSci or PhD project would work and how best to manage and organise myself when undertaking these large open-ended projects. Furthermore, being able to apply what I had learnt during term time to my own research that had the potential to result in actual druggable molecules was hugely exciting and very motivating.

For me, the result of this is a new-found appreciation for the subject, and a much stronger drive to achieve my goals and pursue further research in this field in the form of a PhD. It also gives me a major talking point on my CV when applying to future positions, due to the expansive and exciting nature of my project, which puts me in a great position looking forward. I would highly recommend anyone considering a UROP to go for it, especially if you want to do research in the future. Definitely try and get one in an area that you specifically enjoy, and I would recommend applying early in the year!