



I'm Tom and I did my chemistry undergraduate degrees at the University of Leeds. After carrying out an industrial placement with the pharmaceutical company Roche in Basel, Switzerland in my third year I returned to Leeds for my Masters project with Professor Bruce Turnbull working with protein-drug conjugates for a targeted cancer drug delivery.

I joined the Spring group at Cambridge as part of the 2020 SynTech CDT cohort, and my research continues in the protein-drug conjugate area. I will be investigating antimicrobial peptide-antibiotic conjugates with targeted fragmentation that have the potential to overcome bacterial resistance in gram-negative bacteria infections. The research involves using synthetic methods to construct the trigger moiety, linker core and attaching antibiotics. This can then be linked to a peptide which will target the bacteria and delivery the drug where it is needed. Following initial studies, work can then turn to optimising the conjugate, which will bring in more protein synthesis methodology.

SynTech offers an unparalleled opportunity to learn more about other areas of science that wouldn't normally be available in a PhD program, with lectures, workshops and talks from engineers, computer scientists and physicists. I hope this this program will also allow me to have a better appreciation of other aspects of chemistry as it brings together people from many different disciplines.