**Applied for:** Biochemistry

**Offers received:**

Cardiff University – AAB

University of Nottingham – AAB

Nottingham Trent University – AAB/Unconditional

Biochemistry was once described to me as a way to understand why and how the processes in your body happen at a cellular and subcellular level; this has stayed in my mind throughout my A-levels and I have delved deeper by studying FutureLearn courses. I always want to see and be able to fully understand everything that hides behind an overall concept and this has led me to develop my knowledge beyond my A Levels. My FutureLearn course, 'Biochemistry: The Molecules of Life' developed my ability to study independently and reinforced my commitment to study the subject further at university. A particular interest was the aspect of gene editing along with the debate on the ethics behind it. I was fascinated by the use of the defence mechanisms of bacteria and archaea in the development of gene editing and Crispr-Cas9. I appreciate that this has only been an introduction to university style study and I am keen to immerse myself into the finer details on a daily basis at university.

This year I am studying 'Inside Cancer: How Genes Influence Cancer Development'. This was sparked by a talk at Cheltenham Science Festival about proton beam therapy. There are so many new and inventive ways for treating cancer and this talk has inspired me to want to get into research. Furthermore, I am an avid reader of the New Scientist and I listen to TED Talks, these platforms have permitted me to learn about the new advances in science and technology ensuring that I can get a broad spectrum of not only the fascinating progress in biochemistry but all of science. My interest in the experimental research into Parkinson's or Alzheimer's disease stemmed from an article in the New Scientist from May 2018, about the uses of astrocytes to repair neuron damage. This was then reinforced by the September issue which had an in depth spread about the need for earlier detection of Alzheimer's and Dementia to target pre-symptomatic treatments. To be able to contribute to this type of research would be immensely rewarding.

Volunteering at the local Sue Ryder Charity shop opened up the opportunity for work experience at their hospice. By talking to the doctors, I got to understand the impact of new research and treatments that are being published and the effect on the patients. This has fuelled my enthusiasm for research that will be beneficial to people's lives. In addition, volunteering at the shop has allowed me to advance my communication skills, as you have to be able to work in an environment where you meet a wide range of people as customers and colleagues.

My time management skills have allowed me to undertake Biology tutoring of Y10 pupils,
alongside my study. This has enabled me to pass on my knowledge to others, talk confidently about a subject I am passionate about and also consolidate my own knowledge. It allows me to use my presentation skills as I am being put on the spot to answer questions and present my ideas and information in a clear manner, at an appropriate level for my audience.

Additionally, I have represented my school in the Debating Matters competition. This was
particularly relevant to research, as in the debate there was a topic on whether medical data
sharing is a threat to our privacy. Debating has helped me look critically at the blurred
boundaries between advancing technology and ethics.

Taking part in the NCS scheme with an unfamiliar group of people helped prepare me for
university pushing me out of my comfort zone. Taking on leadership roles and communicating with a range of people has increased my self-esteem and confidence. I am not afraid to ask questions and or seek help when needed; I can study beyond the curriculum independently as well as in a team and welcome feedback from peers and tutors.

I have gained and will continue to develop, the skills and knowledge needed to be a successful biochemist and see myself working in research after my degree.