

Biological sciences are like a cell. Each individual organelle or discipline has its unique role, without which the whole cannot function. Consequently, while the different areas of biology can be studied independently, without each other they cannot be fully understood. This is why I believe that studying biology as an interdisciplinary course would be the ideal way for me to continue my studies. In particular, this would help me to delve deeper into the topics of medication development and the modulation of genetic inheritance.

Having an early interest in natural sciences, I chose to take higher-level classes in chemistry, biology, and mathematics and attended various science summer camps. As a method of self-improvement, I also took part in competitions. In 2022, I finished 4th and 5th in two national chemistry competitions, and in 2023 I represented Hungary at the International Chemistry Tournament, where I won a silver medal. I also received a Gold Award at the 2023 British Biology Olympiad. Meanwhile, reading 'Pleased to Meet Me' by Bill Sullivan raised my curiosity towards epigenetics and how it affects our daily lives almost unnoticed. What fascinated me most was how even small changes, such as a methyl group, can lead to significant consequences in the expression of one gene, without altering the DNA itself.

To delve deeper, I immersed myself in cell biology outside of the high school curriculum. My continued interest from these experiences led me to decide that I would want to pursue biological sciences at university.

To prepare for my further studies, in 2021 I applied to the Milestone Institute, an English language advanced programme tailored for high school students who wish to take university level extracurricular courses. There, I mastered the skill of academic writing and discussed issues including global warming. I also took courses, including Nanotechnology, Statistics, Research Methodology and Cell Biology. However, the most influential course for me was Drug Discovery, which guided me through each step of manufacturing medications, from the early stages of research all the way to mass production. What surprised me the most was the vast length of the trial phase for maximal safety during therapy. At the end of the term, I prepared a presentation about ibuprofen, dissecting the topic from a multidisciplinary approach.

However, learning from textbooks was not enough for me. To gain hands-on experience, I joined a research group at the Budapest University of Technology and Economics. My job was to clone proteins that would later detect uracil in DNA to further our knowledge on why uracil gets built into the DNA deliberately. This gave me the opportunity to learn how to run an SDS gel and the protocols for protein production and purification. Next to this, I also conducted independent research about the connection between honeybees and mycotoxin producing fungi. I presented my results at the 2023 National Scientific Student Organizations' Conference and in an English-language article that was published in a peer reviewed student journal. These research projects gave me insight into what being a researcher truly means and solidified my decision to pursue this career path in the future. Next to my studies, I have played golf for 6 years. As a member of the Junior National Team, I played at national and international competitions every weekend. I also enjoy organising events, so I was president of my school's student council for a year and a half and represented students at the Milestone Institute Student Council as well.

The research-based, small classroom education and mentor system of British universities are very appealing to me. I firmly believe that continuing my studies in the UK would benefit both my personal and professional development, preparing me for a career in the

interdisciplinary world of biological research.

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