

This August I had the opportunity to spend two weeks doing work experience, attending clinic and theatre at the Royal Marsden Hospital in London. Once a woman brought her elderly mother to the gynaecology clinic. She had trouble standing up and had neurological problems that gave her a bad tremor. In the doctors' room I expressed my concern to the registrar that they might not have safety measures installed at home in case of her falling. The doctor advised me to politely raise it, and it felt amazing to be able to get involved in a conversation with the family appropriately. It further reassured me in pursuing medicine as a vocation, so I can keep learning and draw conclusions, making a person's life as safe and comfortable as possible, all with empathy and understanding.

Besides the RMH work experience, I have already been volunteering at Duna Medical Center, a private hospital in Budapest. I am a helper to nurses and OR staff, doing auxiliary care, surgery prep and disinfection. I carry out jobs the nurses might not have time for, for example tending to the emotional needs of patients. I found it intriguing how academic knowledge was put into real-life practice and seeing how a multidisciplinary team works. These opportunities gave me an insight into the everyday life of a doctor and how patients are assessed and treated. I had a chance to experience the differences between the NHS and Hungarian healthcare and sought out explanations for procedures and diagnoses. It was a real privilege when I could join a conversation or had a suggestion that turned out to be right.

My interest in immunology was sparked by *Secrets of the Human Body* by the Van Tullekens. The "Under Attack" chapter made me think about how the immune system must be able to identify cancer cells. Otherwise the probabilities would suggest many more occurrences of serious cancers, according to further studies. In 2019, I was able to join the weekly meetings of a group of elite mathematicians and doctors, whose work focuses around immune checkpoint inhibitor therapy. They discuss immunological theories and recent academic publications. Keeping up with the readings and preparing my questions was an encouraging challenge.

In Year 9, I wrote a 1200 word essay for a school project on the biochemistry of ageing, centred around telomere length and the mechanism of cancer cells. This inspired me to read popular science books, including *Bad Science* by Goldacre, whose techniques of recognising flaws in experiments and reasoning I aim to employ when reading scientific texts. My interest in telomeres was renewed when I started thinking about what telomere lengths mean in terms of long-term survival, how they affect relapses and quality of life in cancer survivors. This was based on

two studies, one concluded that longer telomeres in leukocytes increase the risk of glioma, the other showed that shorter telomeres mean worse survival in cutaneous melanoma patients.

I have always had a strong love for competing. I was able to channel this into maths for the past 7 years, and recently biology, earning four national titles in the former. I have attended invitation-based weekend and summer maths camps for the past six years, organised by the national teams. Since 2019, I have been tutoring at and helping run the weekend camps. I was also responsible for the one-on-one classes of the most talented students there. Additionally, I hold classes at my school's maths club for grades 7-10. Balancing competitive tennis, academics and drama allowed me to improve my time-management and prioritisation skills. Drama classes have also been a chance to gain communication and team-working skills when working on scenes together.

While I realised through work experience and reading that medicine is a physically and mentally demanding job, my experiences make me confident that I possess the aptitude, skills, and motivation to excel in this gratifying and intellectually stimulating vocation.