

Medical Student Enrichment Program

University of Alabama at Birmingham School of Medicine

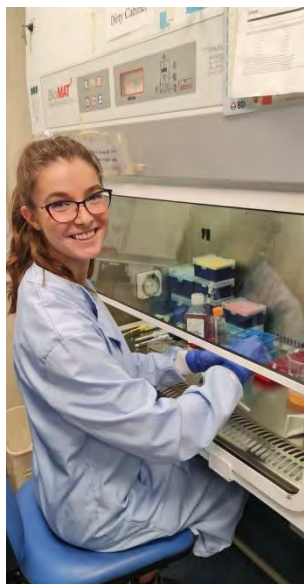
Clinical Elective: England – Oxford University

Dates of Training: June 17, 2023 – July 16, 2023

Student: Jordan Beam, MS1

Date of Reflection: September 5, 2023

“Summer is more summery here than anywhere else I know; not hotter, certainly not sunnier, but more like summers used to be, in everyone’s childhood memories.” - Jan Morris, Author



My summer in Oxford was a dream come true. The city center is right out of a movie scene (literally and figuratively), where people and wind whistle through the timeless, elegant buildings.



Although I was a long way from home, I quickly found my own version of it during my time in Oxford. My research team was incredibly welcoming, and I enjoyed getting to know them inside and outside of the lab. I worked with two postdoctoral researchers, Renée Ormsby and Young Eun Park, who are from Adelaide, Australia, and New Zealand, respectively.



In addition to learning English ways of life, I had the joy of learning about Australian and New Zealand cultures from Renée and Young Eun. At the end of one of our long days in the lab, we went on a riverboat tour down the Thames. We passed the boathouses of each of the Oxford colleges, which proudly bare their individual crests. This was the first of many of our out of lab bonding experiences, and a wonderful way to take in Oxford’s incredible scenery.

It is no wonder the University of Oxford produces countless talented poets-the inspiration surrounds you. From lush green fields to a garden home nestled in wild poppies to students trying their hands at punting on the water, Oxford is filled with natural beauty.



With a university as prestigious as Oxford, I was anxious about starting in the lab. However, my research team quickly and patiently trained me, and I was soon ready to set up/conduct experiments independently. I was eager to be a part of the research team and learn more about the general flow of the lab. Prior to working in Oxford, I did not understand the extensive planning required to conduct experiments. From cells to flasks to pipettes to test kits, everything must be ordered and kept fully stocked. Cells are precious and require a system to keep them viable and healthy. While in the lab, I learned how to quantify cell confluence (growth) under the microscope, and the steps to split them into new flasks when they needed more room to grow. I worked with various types of growth media and was taught to refresh the media when needed to keep cells healthy.



While changing the media and staining cells, I sharpened my pipette skills and gained experience using a serological pipette. We put together and used multiple types of differentiation media to differentiate stromal cells to adipocytes. My experience was enriched by conducting various staining and testing techniques that I have spent years studying. I learned how to count cells with a hemocytometer, and stained cells with crystal violet and oil red to observe their growth in various experiments. I became familiar with the AlamarBlue procedure as we used it multiple times to measure cell proliferation. Additionally, I became proficient in dilution ratios as we worked out the calculations before setting up each experiment. One of our final experiments involved conducting a polymerase chain reaction (PCR) test to

measure gene expression. From extracting and purifying the RNA to synthesizing the cDNA to picking out the primers for the genes we wanted to investigate, it was a fitting culmination of my knowledge and skills gained throughout my time in Oxford. We kept a detailed notebook outlining the experiments we conducted. These notebooks helped keep us on track while running numerous experiments and were a wealth of information when we began analyzing the data.

Among the countless life lessons, I learned from my research team in Oxford, one of the most important was to not be afraid to ask questions. In the medical community, students (including myself) avoid asking questions/admitting confusion. When conducting an experiment with my research team, I learned to speak up when I wasn't clear or needed more information. Renée and Young Eun were understanding of this and appreciated my

directness. I was worried about slowing the team down, but the minimal time spent clarifying prevented a greater amount of time lost due to error. I will carry this skill forward in my future academic and clinical endeavors.

While research was my top priority, I managed to sneak in some fabulous weekend excursions. London, Ireland, Cardiff, and Bath each offered wonderfully unique experiences. Ireland was filled with music and life.

London-just a short train ride away-had action packed streets with adventures at every turn. Bath provided much needed relaxation in a quaint town. Cardiff's people were energetic and joyful, and Cardiff Castle hosted the one and only Lumineers:



The lifestyle in the UK prioritizes finding the time to do what you love. While visiting Oxford, I had my first experience brewing loose tea with an infuser. The process itself was an ode to the way people in the UK live their lives. Great care is put into daily food preparation and enjoyment, in addition to carving out quality time with loved ones.

I will never forget my time in Oxford. I arrived as a wide-eyed medical student eager to learn the ins and outs of the lab, and left with knowledge, experience, and friendships that I will cherish forever. The memories of this trip will always serve as a reminder for me to believe in myself, stay curious, and make time to find joy.

Jordan Beam