

When I first applied for this award I imagined I would be doing a project in an actual laboratory, but no one could have predicted a pandemic so I felt amazingly lucky that I was able to alter this project so it could be done at home whilst still receiving support from the BPS. I never considered myself a particularly amazing student but I knew I wanted to be involved in scientific research in some capacity in the future, so the fact that I won this award and was able to gain more experience in conducting first-hand research was incredibly valuable to me and I'm very thankful to the society.

In terms of my research, the main focus was on genes that crossover in conferring risk to both schizophrenia and autism spectrum disorders. I looked for genes listed both in databases for autism (Simons Foundation Autism Research Initiative) and schizophrenia (SZDB) and compiled a list of 405 genes that had evidence to support their involvement in both disorders. From here I classified the genes according to their function (cell cycle, DNA repair, synaptic etc.) and also narrowed down the list to 8 genes based upon the strength of the evidence of their involvement in the disorders. From this list I chose to look at the mutations present within these genes that are associated with each disorder to see if the linked mutations clustered in different domains of the protein product of the gene. Of particular interest was the gene KDM6B, a histone demethylase (enzyme that can affect which genes are expressed in a cell) that also plays a role in nervous system development. This gene was interesting specifically because the mutations linked to autism tended to cluster in a completely different domain (towards the N terminus) to the mutations linked to schizophrenia (towards the C terminus). If I was able to access a laboratory I would have liked to focus on this gene in experiments. Nevertheless, undergraduates at my university are currently performing experiments on the equivalent gene of KDM6B in the nematode worm *C. elegans* to see how mutations in the gene affect behaviour of the worm and this undergraduate project was directly influenced by the research I performed this summer.

Currently I am in my fourth year of an integrated Master's degree at the University of Southampton, about to start my Master's research into microglia and Alzheimer's disease. This is very different from the work I did this summer, but I feel like the extra experience I gained this summer in terms of being more independent with my own research and more confident in my ideas will benefit me greatly as I work to complete my Masters and apply for PhD positions. I will also be presenting a poster at the BPS event Pharmacology 2020 where I will be going into more detail about the research I performed. Advice I would give to future applicants is to apply even if you don't think you'll get it as it was a shock to me when I was awarded it, and to be clear in stating why you want this extra experience. It really is helpful in terms of getting familiar with working by yourself as well as within a lab group, and becoming more confident in sharing your ideas with more experienced academics.