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The NU Centre for Cancer Studentship in Paediatric Oncology

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Phoebe Snow

PhD title: 'Identifying novel MYC regulated targets in high-risk IG-MYC rearranged acute lymphoblastic leukaemia'

Hi, I'm Phoebe, and thanks to your support I am looking forward to starting my PhD in September, investigating a rare type acute lymphoblastic leukaemia. I completed both my undergraduate (BSc Biochemistry) and postgraduate (MRes Cancer) degrees here at Newcastle University, where I have gained a particular interest in cancer research and epigenetics (the study of how our body reads our genetic code). Completing university during the pandemic had many drawbacks, but a huge benefit for me was my first exposure to bioinformatics (working with big data) and the power it has in research.

I completed my master's research project in Dr Lisa Russell's lab, where I was able to hugely develop my bioinformatics skills, namely the analysis of epigenomic data (reversible changes to the genetic code that do not change the code, but changes how our body reads the code), in addition to learning many laboratory techniques.

I have now progressed to being a Research Assistant within the group. I am already fully immersed in this project, and I have developed an excellent knowledge of this type of blood cancer. I am eager to continue this research to help find novel treatments for this rare group of leukaemia patients.



During my time in this post, I have successfully optimised a new laboratory technique. This technique allows us to look at where our protein of interest, called MYC, binds in the genetic code. This is important, because when MYC binds to the genetic code it can switch other genes on and off. This contributes to the cancer developing and growing in the body. I have also managed to generate a computer script that allows me to analyse the data that is generated from this new technique.

This role has taught me the reality of research, in that it doesn't happen overnight, but I also enjoy the challenge of getting something to work! I am aware of the difficulties that lie ahead of me in this PhD project, but I know I have the drive, inquisitiveness, and enthusiasm to see it through.

Acquiring a PhD in this subject would be an incredible achievement for me and something I feel I have spent my educational journey working towards. I see this as being an important foundation into a career in academia, and further contributing to this field of research. It would allow me to build on the work I have already completed, whilst gaining a wide variety of additional skills, opening many doors for me in the future, as well as helping advance our understanding of this disease.

Thank you so much for your support. Without your donation, I wouldn't have the opportunity to make a difference to the lives of children and young people with this disease.

I'm really looking forward to keeping you updated on the project as it progresses, and I hope you can feel proud of the difference you're making.

Thank you!

