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Describe your role in 50 words.

I'm a final year PhD student in Professor Gwyn Gould's lab at the University of Strathclyde in Glasgow. My research is helping us to better understand the mechanisms underpinning glucose transport in fat cells – a process that doesn't work well in people with insulin resistance and type 2 diabetes.

How did you develop an interest in diabetes?

I did my undergraduate degree in Biomedical Sciences at the University of York, where I had the opportunity to work on an extended cell biology research project, in Professor Nia Bryant's lab over my final two years. Although my project at the time was not on diabetes, many of my colleagues in that lab were involved in diabetes research, which sparked my interest in the topic. So, when a diabetes-focused PhD project became available here in Glasgow I jumped at the opportunity!

What do you find the most challenging and the most rewarding about your role?

The most challenging aspect of doing a lab-based PhD is the setbacks in experiments. Sometimes things in science just don't work, whether it's contaminated samples, equipment with a 'mind of its own' or interesting data that just won't replicate. There are lots of ways a study can go wrong and it can be tough to keep motivated during those times. However, I find the most rewarding thing about my work to be communicating my results to others when things do go well. I particularly enjoy the challenge of making my work accessible to non-specialist audiences.

What have you achieved recently in diabetes research that you are excited about and keeps you motivated?

I have recently optimised a technique called Proximity Ligation Assay (PLA) for my project, which allows me to look at fat cells under a microscope and tell if pairs of proteins are physically interacting in the cell, and where in the cell this is happening. This has allowed me to study in-depth the interactions between proteins that are important for glucose transport and how these interactions change in response to insulin. I hope that using this technique to improve our knowledge of the basic biology of fat cells, will lead to improvements in our understanding of the mechanisms underlying insulin resistance in type 2.

Tell us about any involvement you have with Diabetes UK.

I'm fortunate to have my PhD research funded by Diabetes UK. I've attended their Professional Conference to present my research and have benefitted greatly from the Diabetes UK PhD student networking days over the past three years. I can also occasionally be found writing for the Diabetes UK website and magazine!

What is coming up next for you at work?

This September I will be spending two weeks in Sweden, as part of a research collaboration between my lab group and a group at Lund University. I'm really looking forward to meeting some international colleagues in person, sharing knowledge and skills and doing some great science together.

What do you think is the most exciting thing on the horizon for diabetes research?

There is so much exciting research being done now in the broad field of diabetes. In type 2 research, the results of the ongoing DiRECT (Diabetes Remission Clinical Trial) study, showing that a low-calorie diet for some people, leads to remission of type 2, which is really promising. Equally, early results from the ReTUNE study have also shown that a low-calorie diet can lead to the remission of type 2, even in people with lower body

weight. Hopefully, following these studies, we might be able to learn more about why low-calorie diet programmes are so effective on a cellular and metabolic level.

For my colleagues who work in type 1 diabetes research, I'm excited about a number of studies working towards the goal of a cure, from immunotherapy treatments to the development of an artificial pancreas. I was thrilled to hear about the incredible investment by the Steve Morgan Foundation in type 1 diabetes research announced in April.

Any tips and final thoughts to share with the Update readers?

Whether you're a researcher, clinician, or just someone with a professional interest in diabetes, my best tip would be to take full advantage of events run by Diabetes UK. I learned about all the exciting research into type 2 diabetes remission and the search for a cure for type 1 at the Diabetes UK Professional Conference this year. It was amazing to see the depth and breadth of research taking place in this field. Additionally, I benefitted hugely from the Diabetes UK PhD student networking days. A yearly event where all the Diabetes UK – funded students get together to share their research and support one another. It's so valuable that, whatever your work is, you get the opportunity to spend time with people who understand the challenges of your job.

Diabetes research is hard but important work. It's great to be part of a community of researchers and clinicians connected through Diabetes UK. It's especially valuable for those of us doing lab-based cell and molecular research to connect with the people who live with diabetes and those who care for them.

Finally, what do you do to relax outside of work?

Though it's not always relaxing, in my spare time I help run an amateur theatre company with some amazing friends. We're called The Three Sisters Theatre Company and we put on our first show, 9 to 5 The Musical at the end of July 2022, in Paisley, which was fun. It's great to have a hobby that feels very far away from the world of science.

When I'm relaxing, I like to read, write and go hiking.

i If you would like to take part or nominate someone in your team for Last Word, please email us at: update@diabetes.org.uk

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Cycle for us

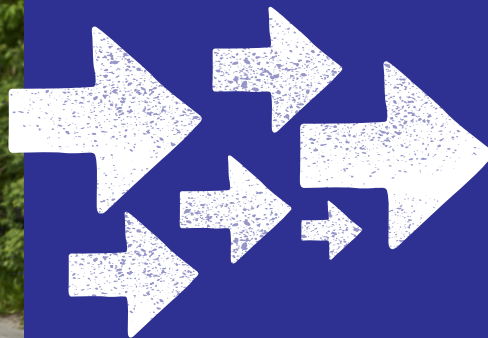


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We will be delighted to have you on our team and are here to support you in any way we can. If you have any questions email us at: events.fundraising@diabetes.org.uk