

# SCISOC SPOTLIGHT

BY THE CAMBRIDGE UNIVERSITY SCIENTIFIC SOCIETY

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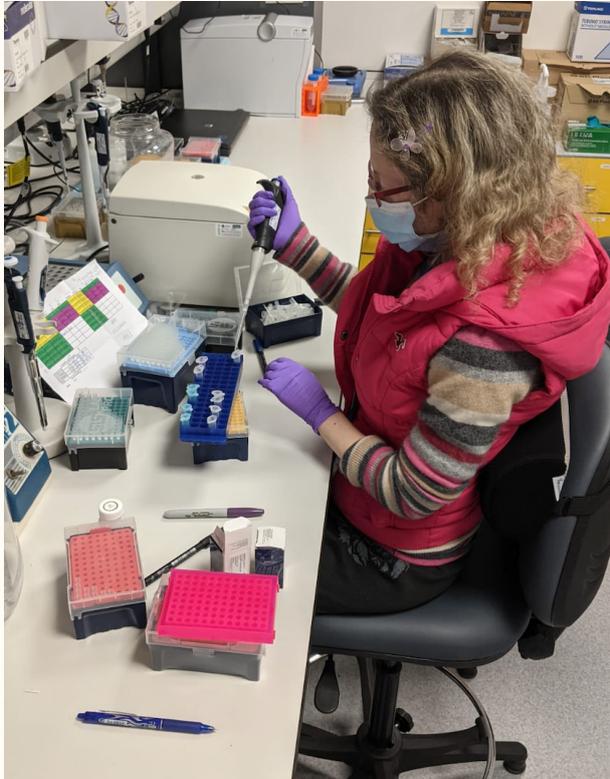
## RESEARCH FOCUS:

MAKING PLATELETS FROM  
INDUCIBLE PLURIPOTENT  
STEM CELLS

My current research is focused on **making platelets (which are important in blood clotting) from inducible pluripotent stem cells**. The rationale behind this is that there is a constant demand for the transfusion of platelets (as well as other blood components) and **supply is limited** by the **number of donors, their shelf life** (they can only be kept for < 7 days), and their **compatibility with the recipient** (the recipient may produce antibodies against the transfused platelets). More specifically I am looking at ways of making these platelets 'more effective' by loading them with proteins that are involved in blood clotting. This idea is to enhance blood clotting in areas where there is bleeding. Prior to this, I worked on a disease called **pulmonary hypertension**, which is high blood pressure in the lung circulation. This can cause **right-sided heart failure**. There are few effective therapies available and I was looking at the role of the bone marrow (where various blood cells are made) in this disease and the potential for bone marrow transplants as a therapy.

## WHY RESEARCH?

I decided to pursue research as I found my degree in human biology fascinating and wanted to carry on learning more. I also wanted a varied career and research is definitely that! My job involves coming up with hypotheses, devising experiments, doing experiments, analyzing data, writing papers and writing grants to obtain funding. In addition, I also supervise graduate research students and undergraduates. I wanted to 'make a difference' and any finding, no matter how small, does just that. I come from a family of Scientists and I think that rubbed off on me!



**"Don't be scared to try something, it might turn out not to be the right thing for you, but you will never know until you try."**

## ONE PIECE OF ADVICE...

My advice to any aspiring researchers would be to go for it! I would also say try to get some experience in a research lab if you can. Undergrad practicals are good, but research is a totally different ball game as you will find out during part 2! There are various 4 year PhD rotation programmes and these are really great as they enable you to rotate around 3 labs for the first year and then choose which lab you would like to go to for your PhD. This gives you great exposure to different labs and no 2 labs are the same! Not only are the projects you work on different, but also the people and different labs have very different ways of working and it's important to find a lab that you 'fit in to'.