

The Brilliant Club Case Study



Tutor Name:
Gareth LuTheryn

PhD Thesis Title:
Bioengineering Microbiology:
Ultrasound mediated
therapies for treatment of
biofilms in chronic wounds

PhD University:
University of Southampton

Tutor since: 2018

Brilliant Club Programme:
The Scholars Programme



Tell me about your PhD Thesis

My research is about learning how to kill bacteria with nitric-oxide filled bubbles. I design micro-bubbles that respond to ultrasound by expanding and contracting rapidly; we can fill the inside of these bubbles with nitric oxide, which interacts with bacteria in a way that tells them to vacate areas where they congregate in 'biofilms'. This allows us to treat wound infections that resist normal treatments with antibiotics, and make the treatment of the infection a lot more rapid and effective. The long-term goal is that we save people from amputation, which is currently the only course of action for wounds that don't heal.

When did you first apply to become a TSP tutor, and what made you want to apply?

In 2018 – one of my relatives' children had started The Scholars Programme, and that's how I heard about it for the first time. Once I found out what The Scholars Programme does for people, I knew I had to be a part of it, because I knew that if I'd had something like that available to me when I was at school, it would have made a huge difference in my academic journey.

What was the name of your Scholars Programme course?

'Bacterial Biofilms: Misunderstood Microbes or Public Health Hazard?'

How did you find your experience of Scholars Programme Training Weekends?

Full disclosure: I was expecting them to be boring and a tick-box exercise, but they were immensely informative, fun, and engaging! The tools you're equipped with to go into schools and deliver content make you far more effective than you could ever be on your own.



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Has The Scholars Programme affected the way you approach undergraduate teaching?

In undergraduate teaching, there often aren't a lot of check-points built in for assessing everyone's understanding before you move on. What's helped the most are all the strategies that the training uses to assess learning before you move on to new concepts, and introducing activities, even for undergraduates, to help check their understanding as you go. This has made a huge difference, because it reduces all the emails per week from pupils who are struggling to keep up, because those check-points are in place to support them effectively.



What has been your most rewarding moment as a Scholars Programme tutor?

At one of my placements, I had one pupil in particular who throughout the entire programme would insist that they were stupid, they had no idea what they were doing, they didn't understand and so on. It did take a lot more work and adapting on the spot to help them understand the content, but they finished with the second highest first in their group. Seeing that progression, and in the feedback session seeing them so surprised and filled with confidence about the fact that they'd done so well was amazing. Their lead teacher mentioned that they went home so happy, enthusiastic, and confident about their school work going forwards, so that was a huge highlight.

Do you think that being a Scholars Programme tutor has helped in your own development as a researcher?

In some ways – what I do in research is very lab-based, but the more teaching I do the more able I am to adapt rapidly, which is a really important skill in research, so in that sense that adaptability has been really important.

Do you have any advice for someone looking to apply to work as a tutor?

Anyone who has a passion for teaching and wanting to bring out the best in students, in helping them to fulfil their potential, should definitely apply. For anyone who wants to advocate access to university, especially for pupils from non-traditional backgrounds, it's a fantastic opportunity to do that.

To find out more about how you could become a Scholars Programme tutor, please visit our website at www.thebrilliantclub.org

THE SCHOLARS PROGRAMME