



An R&D Scientist Intern's Journey at TECL

Maria is currently pursuing a Bachelor of Science degree in Biochemistry at the University of Bath. During her year in industry, she has been working as an R&D Scientist Intern at The Electrospinning Company, with a focus on our Caladrix[®] Technology coatings platform. Following on from the completion of her Bachelor's degree, she hopes to continue her education, with an emphasis on treatment of disease.



Maria Smith holding a hollow electrospun tube for vascular applications in our cleanroom

Maria's Role

Maria has been part of the team in developing novel methods in covering stents and implants for the development of our Caladrix[®] Technology platform. Principally, she has been working on prototyping and feasibility projects. Along with this, her responsibilities have included compiling project results and communicating this to the wider team, as well as customers; analysis of coated devices; and literature reviews on polymers and device applications.

Other Opportunities

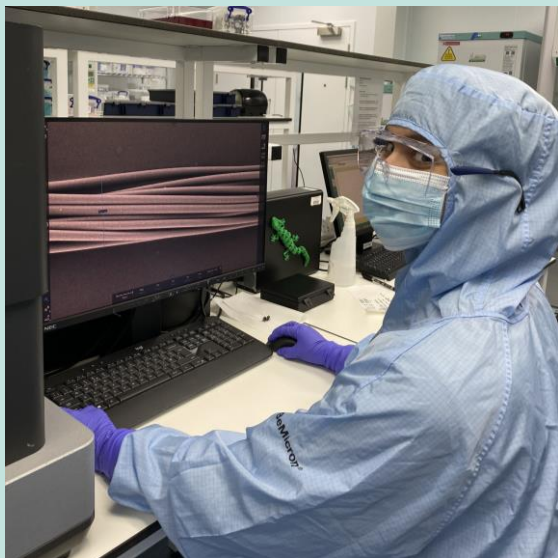
In addition to the technology development side of her placement, Maria has also led various other in-house actions, that have aided her personal and professional development. These actions include compiling slide decks for wider company use; production of demonstration stents to be displayed at conferences; and writing an article about woven and non-woven textiles and the capabilities of the Caladrix[®] technology platform for the Electrospinning newsletter. Maria has also been an integral member of our Kaizen team, striving for continual improvement. As a member of this team, she headed two projects the first of which involved streamlining and optimising production of a part that is integral to our electrospinning processes, and the other centred on the design of informative lab posters.

Maria's Projects

Maria has worked on a multitude of coatings projects over her year with Electrospinning, however, there are three that she is especially proud of. The first was a project on coated coronary stents, which she was extensively involved in over the year and was integral in standardising the process for. The second was a project on electrospun-covered atrial defect occluders. This project was highly challenging due to the complex shape of the device, but the customer feedback was very positive and as such, Maria deems the success of this project as one of her biggest achievements at the company. The final project Maria wanted to highlight was on the fabrication of synthetic heart valves. Throughout this project, she worked closely with a senior product development engineer and a platform manager, which gave her the opportunity to learn from senior team members across multiple departments and develop her collaborative working skills. Further to this, this unique project allowed her to learn about developing new processes and specialty equipment, and to work on her customer engagement skills.

Other Activities

During her year at The Electrospinning Company, Maria has taken the opportunity to attend conferences such as the London BioTechnology Show and MedTech in Birmingham, as well as attending lectures at the Inorganic Chemistry Lab (ICL) at the University of Oxford.



“As I move forward into the next chapter of my career, I will always look back on this invaluable experience at The Electrospinning Company – where my fellow colleagues, their expertise, and the cutting-edge technology made every day and project exciting. I felt a part of the team from the get-go, and I look forward to implementing the huge range of skills and knowledge developed from this year-in-industry into the final year of my degree.”

The Electrospinning Company Ltd

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