



An R&D Engineering Intern's Journey at The Electrospinning Company

Tyla is currently pursuing a Bachelor of Engineering degree in Bioengineering at Loughborough University. During her year in industry, she has been working as an R&D Engineering Intern at The Electrospinning Company. Through this placement she has gained invaluable knowledge and experience in biomaterials, which will support her future studies.



Tyla Falkenberg in our cleanroom.

Tyla's Role

As an R&D Engineering Intern, Tyla's role has been diverse and engaging. She has worked on a wide range of projects and has focused extensively on our technology platforms. Within our Kalyptix[®] technology platform especially, she has applied her skills to early-stage feasibility projects as well as to projects in the later design and development stages. Using our Kalyptix[®] technology, Tyla has created non-resorbable membranes with unique and tuneable features. She has also completed an extensive analysis on the effects of sterilisation on a selection of Kalyptix[®] technology membranes.

Skills and Opportunities

Over the course of her year at The Electrospinning Company, Tyla has acquired many new skills and improved upon her existing ones. She has applied her skills and knowledge in CAD modelling, statistics, and fluid dynamics on various projects from designing new equipment, to process scale-up. She also gained hands-on experience with many new scientific instruments such as our electrosp spinners, laser cutters, and rheometer.

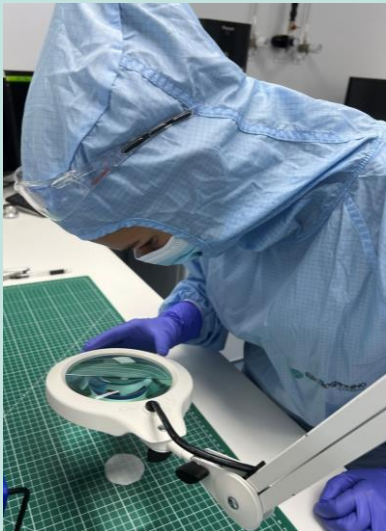
Further to this, she had the opportunity to attend the London BioTechnology Show and the Med-Tech Innovation Expo. These conferences allowed her to learn more about the bio-tech and med-tech industries and the broad scope of possible applications of electrospinning technology.

Tyla's Projects

Tyla has had the opportunity to work on projects spanning all areas of the human body, from the eye to the lower extremities. She has had several notable achievements over the year, but one that she is particularly proud of is her work on a Kalyptix® Technology project that involved developing novel recipes for polymers previously unexplored by the company. She independently worked with these polymers to develop a stable process for creating bilayer materials with antithetical properties.

A standout project for her in terms of learning opportunities this year was the engineering study that she independently planned, executed, and documented. This project required her to become familiar with specialist software for project management and statistical analysis. It also allowed her to apply her prior knowledge of statistical tests whilst learning new industry specific statistical methods. Along with this, she learnt about the intricacies of planning a large-scale project, practiced extensive data collection, and improved upon her scientific writing skills.

Tyla is currently working with The Electrospinning Company for her final year dissertation project, focusing on the optimisation of fibrous structures for compound delivery with an intended application in the treatment of polycystic ovarian syndrome. Through this project, she aims to make credible contributions to the biomedical industry, leveraging the invaluable expertise and resources provided by both The Electrospinning Company and Loughborough University.



“My time at The Electrospinning Company has been a transformative journey, where the fusion of pioneering innovation and practical application has deepened my passion for biomedical engineering. Collaborating with industry experts and leveraging advanced technologies has provided a strong foundation for my career, making this experience profoundly impactful.”

The Electrospinning Company Ltd.

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