Biotechnology and Biological Sciences Research Council
Engineering and Physical Sciences Research Council

EBNet Placement Support,
Miss Charlotte Lee
University of Stirling
(PL202302)

EBNet Environmental Biotechnology

Internship: MiAlgae Ltd.

MiAlgae

'EBNet's Placement Award has allowed me to explore one of the many opportunities available to STEM PhDs after completion and given me confidence in how I might now use my skills within my future career.' – Charlotte Lee, University of Stirling

EBNet's placement award has allowed me to take time out from my PhD to engage in a 3-month internship with a start-up biotechnology company which uses co-products of the whiskey-fermentation industry to ferment omega-3-producing algae. MiAlgae is the first company I've worked with where I have been able to utilise my skills in an industrial setting, and so has been an eye-opening experience.

For one, the leap from my PhD project, which investigates the response of bacterial communities to pollution, to the projects available at MiAlgae was relatively large. I therefore learned a lot about the intricacies of algal fermentation, and how to best monitor growth and lipid (i.e. omega-3) production within the company's R&D department. In conjunction with this steep learning curve, I was also able to cultivate skills in gas chromatography, 'Design of Experiment', and the different analytical softwares used to deduce the outcomes of lab-scale tests.

The agile workflow employed by all departments of MiAlgae also allowed me to quickly step in as a contributing member of the team with my own sub-project by the internship's mid-point. I was encouraged when working there to observe and attempt every aspect of the development and production process. As part of this, I therefore also visited MiAlgae's production site, where I saw the industrial-scale fermentation vessels as they produced their first output for distribution. Here, I could see the immediate results of my work in R&D put to use at scale, and how large-scale operations function. This is again in contrast to my work within academia, where research outputs take years to be put into practice, if at all.

Without EBNet's facilitation of this internship, I wouldn't know the breadth of opportunities available to STEM PhD's outside academia. I would also be far more hesitant to make any sort of transition into industry and apply my skill set there. In contrast, I now realise that the jump between academia and industry is not as large as originally thought.

I also realise that, beyond the suitability of the job to my skillset, it is also very important to consider a company's advertised work/life balance, working environment, and sustainability/development goals when searching for a job in the future. These are the aspects of my work with MiAlgae that truly made a positive impact on my approach to work and increased 'job satisfaction'.