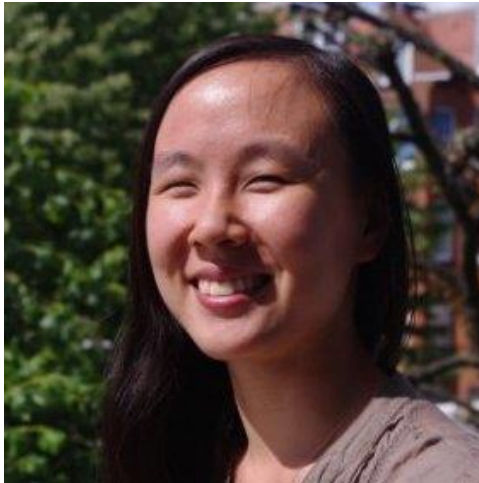# Yan-Kay Ho, Cambridge Consultants

'I now have a wider network of contacts working in the SynBio field and in consulting/analyst positions; I have improved my networking skills and have a better idea of the different structures within a non-academic environment'

I wanted to find out what work in a non-academic environment was like and whether I would enjoy / be suited to consulting as a career path. I secured a 13-week placement with Cambridge Consultants, a product development and technology consulting company.

I worked closely with experienced staff members as part of a multi-disciplinary team supporting Cambridge Consultant's projects and she participated in a number of their internal training courses for new staff members. One of my key projects was to investigate the current landscape for synthetic biology start-ups worldwide for the UK Synthetic Biology Leadership Council (SBLC). This included a detailed analysis of the start-up companies, including market segmentation, technology readiness levels, and funding sources/amounts. I also helped design DNA vectors and plasmids for an E. coli and B. subtilis heavy metal biosensor, explored software tools for DNA design and assembly, and supported the Cambridge-JIC iGEM team for their 2016 project in chloroplast engineering. I wrote a synthetic biology blog for the Cambridge Consultants website (to be published) and drafted a few other guest blog posts. I had the opportunity to attend synthetic biology-related conferences/events, including the first UK Biohackathon (sponsored by Cambridge Consultants), the 13th Technology Venture Conference, Café Synthetique evenings, the 2nd UCL-Birkbeck Synthetic Biology Showcase, and the 8th IWBDA conference.

My academic background in SynBio/molecular biology was useful with helping with the genetic design and development of the heavy metal biosensor. I had experience with using molecular biology software, which helped in identifying features of interest of the software requirements specification. I had previously participated in iGEM and also advised 2 iGEM teams, which proved useful when advising the Cambridge iGEM team for CC.

So what were my low and high points of the placement...?

Low points: adjusting to more desk-based research work, and working at tighter time-frames/deadlines. Discussed with supervisor to work on different projects, and to get

additional support from other colleagues if required.

High points: open discussions for idea generation (for biosensor platform, SynBio software); networking with SynBio/biotech people from different fields; researching SynBio start-ups and the different applications they are involved in.

Before my placement started I wanted a better idea of what else is outside academia, i.e. a rough explanation of what the key different career paths entail, e.g. in consulting, analyst, policy/government, industry, pharmaceuticals, start-ups, business.

The placement has impacted my professional development and skills. I now have a wider network of people working in the SynBio field and in consulting/analyst positions; have improved a little in networking skills. Have a better idea of the different structures within a non-academic environment (e.g. line and project managers, job bands, working on projects for a client, confidentiality, and how time has a price value especially in consulting). Have more business awareness, at least in knowing where SynBio applications, and not just research, are currently going, especially if I want to stay in this field.

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