Industry careers for molecular bioscientists: an interview with Jennifer Mitchell

Jennifer Mitchell is a scientist at Redx Pharma and Board Member of the European Laboratory Research and Innovation Group (ELRIG). She completed her integrated undergraduate and master's degree in biological sciences at the University of Liverpool and took on a graduate industrial role as an associate scientist at a biotech company. After 2 years in this role, she went back into academia to complete a PhD before moving back to industry. Jennifer began her involvement with ELRIG, a not-for-profit organization serving the life science and drug discovery communities, as a student volunteer in 2017 and she has been part of the ELRIG General Committee since 2018. She is also part of the ELRIG early career professional (ECP) workgroup, which aims to engage the ECP scientific community through career development workshops and outreach events.

In December 2020, the Biochemical Society hosted a session on industry careers in the molecular biosciences as part of its *Biochemistry Focus* webinar series dedicated to early career researchers. *The Biochemist* spoke to Jennifer, panellist on the day, to find out more about her experience working in industry and her broader contributions to the community.

Can you introduce our readers to the trajectory of your career to date?

I realized I loved research during my undergrad project. I found it challenging and fascinating, and it all evolved from there! I also completed an undergrad module in oncology and it had me hooked. I transferred onto an integrated master's degree, and as part of this I had a 6-week placement at a biotech company, focusing on the development of small molecule inhibitors in oncology. I managed to secure a graduate role with them when I finished my master's and absolutely loved working in industry. I found it a tough decision but decided that, for career progression, I wanted to do a PhD. After nearly 2 years in industry, I went back into academia to start my PhD. My project was still based in oncology, but was basic research, and I learnt so many different scientific skills. While I wanted to remain open minded about staying in academia, I found I thrived in the industrial setting, so after finishing my PhD I went back into industry. Working as a research scientist for Redx Pharma, a biotech company focused on the discovery and development of novel targeted medicines for the treatment of cancer and fibrotic disease, has been a great experience. I have worked on both pre-clinical and clinical drug discovery projects and have been able to apply my skills from my PhD.

Your career so far has involved moving from industry to academia to industry again. Did you experience any specific challenges when making this transition?

When I transitioned back into academia from industry to start my PhD, I had to adjust to the change in pace. I found working in industry to be very fast paced and goal orientated, which I had really enjoyed. A PhD is more of a marathon and at the beginning of the 4-year project I had to make sure I set realistic goals. Completing a PhD also meant that I had to be more independent with my research and had much less contact with my supervisors. In industry, I had weekly one-to-one meetings with my supervisor, whereas in academia these meetings were fortnightly or monthly. I found I became an independent scientist and thinker, and had to get to grips with project management skills.

Another challenge was the change from feeling very much part of a close team, in industry, where everyone is working together in order to meet and exceed the company goals. Although there are people to offer support such as your supervisors and lab team, I realized when I started my PhD that the project is very much your responsibility. Also, publications are important in industry but there is much more weight and pressure in academia to be assessing if your work could be published, so I had to make sure I adopted this mind-set.

Budgets are also very different between academic and industrial research, so this was a learning curve too.

What would you say recruiters look for when hiring for positions in industry and how should you adjust your CV when applying for jobs in this sector?

Transferable skills and being able to apply academic knowledge to an industrial environment are important, as is a good understanding of how the industry works. Key attributes include being target focused, a great team player and a good people person. Communication skills and the ability to work independently are also highly valued. Understanding the needs of industry and the differences compared to academia is of course vital. In terms of CVs, academic CVs tend to be longer, whereas for industrial positions I would recommend two sides of A4, max. Highlight your key transferable skills that are relevant to industry and ensure the CV is easy to read so that a recruiter can pick out your key skills and attributes.

How much did your PhD project dictate what company or industry you ended up in; is a change in field from what you were researching in your PhD possible?

I changed fields from my undergrad to my master's and my interests evolved as I did more research. It's definitely possible to change fields. I would say it's important to have a passion for the subject area that you're doing your PhD in. PhDs are long and challenging, so being involved in an area you are enthusiastic about is helpful. It is also possible to move into different therapeutic areas after your PhD. I've chosen to work in therapy areas that I'm passionate about and want to make a positive impact on patients' lives.

What are the most enjoyable and challenging aspects of working in industry?

I love the fast-paced nature, the support and the feeling of being part of a team that comes with roles in industry. Working on projects that are closer to patients is also exciting and you get to work with new and exciting technologies. Personally, I thrive off the culture in industry.

How can PhD students better prepare themselves for a career in the life sciences industry – what additional skills/experience is required?

If possible, see if you can get a placement during your PhD in industry. Even if it's just a few weeks or months. If this isn't possible, careers events and conferences often have 'career zones' or 'meet the recruiters' where you can speak directly to recruiters from industry and get tips on how best to market yourself for this sector. Take time to understand the needs of industry and how companies work and then map out your key transferable skills – you'll be surprised how many you have! An integrated undergraduate/master's degree is a good way to get experience, or a PhD that has an industry placement component.

Working at the interface between scientists and non-scientists is also an attractive avenue for some people. Are there positions in industry that cover science communication?

Definitely, and this is something I am about to explore as I have secured a role as a medical writer recently. I have loved my job working as a research scientist and felt ready for the next challenge in my career to apply my scientific knowledge and skills. In terms of scientific communications, many large pharma companies outsource communications work to medical communications agencies, consisting of scientists with academic/industry experience who are talented at communicating science.

Is having a PhD a requirement for industry research and development; are publication outputs considered when transitioning?

Not necessarily. I've personally found that having a PhD is likely to be helpful for career progression but, having said that, there are very talented scientists in industry who do not have PhDs and will progress all the same. A PhD is a significant undertaking, so give it a lot of consideration if this is something that you're thinking about. Again, speak to industry recruiters at conferences and careers fairs to understand the entry requirements and get a sense of whether they think a PhD would be advantageous. Publications are a lot less important when applying for industrial roles compared to academic ones.

What's the best advice you can give new graduates trying to get into industry who don't yet have experience?

Get networking! Attend conferences, such as those run by ELRIG and the Biochemical Society, careers fairs, online webinars and get active on LinkedIn. You never know who you might meet or connect with and how this might shape your career.

What's career progression like for an industry scientist?

Career progression is very well defined. Roles progress from entry-level roles up to senior roles in a structured fashion.

You're also a Board Member and part of the ECP workgroup at ELRIG. Can you tell our readers a bit

about your work on this front and the importance of ECPs to the broader bioscience community?

When I first attended an ELRIG conference, I couldn't believe the quality of the science on offer – and that it was completely free! The cost of some conferences can be a barrier to the ECP community, so events like those run by ELRIG can be a great opportunity. There are multiple tracks of scientific talks, a huge vendor exhibition where you can learn about the latest developments and technologies to support your research, and there are lots of networking opportunities. I volunteered as a student helper and was introduced to the ELRIG Chair. We spoke about how ELRIG could benefit the ECP community – and how ECPs could benefit ELRIG! ECPs are the future leaders of the bioscience community, so it's important that their voices are heard and that they get the support they need as their careers develop.

ELRIG started an ECP workgroup and, since 2018, we have run a range of events and workshops, focusing on career development and progression for ECPs. We have run informal 'speed networking' sessions, CV clinics with industry recruiters, panel discussions with insights into different careers post academia and much more. This work has been really rewarding and we have been guided by the needs of ECPs in the life sciences industry to help them in their developing careers. I was elected as Board Member of ELRIG a year ago and this has been a fantastic opportunity to contribute to the strategy and leadership of ELRIG. I am learning lots and getting experience that I wouldn't usually get in my day-to-day role.

Find out more about ELRIG and their support for ECPs on their website: elrig.org ■