Moving between academia and industry

Crossing the great divide?

Many scientists feel that at some point in their career an irreversible choice must be made: to pursue academia or industry. For some, these two career options represent completely distinct incompatible disciplines. But is this really the case?

This is a question that is particularly pertinent at the moment given the current volatility of the academic and industrial sectors. Changes in research funding and the downsizing of ‘big pharma’ in the UK mean that the landscape is no longer as it once was. Previously dominated by large multinational pharmaceutical companies, the industrial sector now also encompasses a range of ‘small pharma’ as well as biotechnology companies, contract research organizations (CROs) and pre-competitive collaborative initiatives such as therapeutic centres of excellence. In the past, a complete chain of drug discovery processes would often be carried out beneath one roof; however, this is no longer the case. Collaboration, interdisciplinarity and researcher mobility are key in this new environment.

There are a number of legitimate differences between the two sectors that can act as a barrier. In academia, the value of academic freedom is prized and incentives are highly individualized. Academics tend to be scientific researchers first and managers second. In contrast, those working in industry often have somewhat different priorities and are largely focused on team goals. In industry, communication and management skills as well as breadth of experience can be valued as highly as depth of individual expertise. There are also ‘softer’ barriers around the academic perception of industry and its perceived ethics and constraints.

To address these very issues and to discuss how researchers can indeed cross the ‘great divide’ between academia and industry, the Academy of Medical Sciences (AMS), with the support of the Biochemical Society as a member of the Drug Discovery Pathways Group (DDPG), held a workshop on 6 June. Involving a range of participants – from anxious PhD students to emeritus professors, as well as industry champions and representatives from learned societies – the aim of the day was to inspire, inform and provide networking opportunities, while breaking down barriers and facilitating connections.

The day commenced with a keynote talk by Ed Bullmore, Professor of Psychiatry at the University of Cambridge and both Vice-President of Experimental Medicine and Head of GSK’s Clinical Unit Cambridge. As his titles would suggest, he has very successfully managed to bridge both the academic and the industrial...
He spoke about his experiences, beginning as a psychiatrist before undertaking a Wellcome Trust-funded PhD in fractal neurophysiology, and the opportunities and challenges he has faced. He maintained that he had no real career plan, but that an unusual and differentiated skillset set him apart from his peers. Once elected to chair of Psychiatry at the University of Cambridge in 1999, he was faced with the challenge of developing additional skills in areas such as management, strategic planning and fundraising – skills he identified as key in the modern industrial landscape, but which traditional scientific training does not necessarily provide.

It was a meeting with a GSK executive that led to his appointment in industry, a fact that served to underline the importance of facilitating cross-sector interactions and discussions. He referred to the view held by many academics of this as ‘going over to the dark side’ – an unhelpful and now somewhat outdated perspective. Despite this, Professor Bullmore maintained that enabling movement across the divide is vital and that industry–academia partnerships are key in the future of medicines research in the UK. Industry is increasingly looking to externalize research and development, to share data and to develop therapies with academics and to be more innovative in general. He emphasized that taking opportunities to connect with industry and recognizing that public and charitable funding is increasingly looking for real-life impact is crucial.

Inspired by Professor Bullmore’s words, a structured networking session then followed which was designed to facilitate quick introductions between the large number of attendees and hopefully aid in breaking down barriers and fostering connections.

The next session focused on options in industry and involved talks from two panels of speakers. The first was a drug development panel consisting of Dr Keeva McClelland from the Almac Group, Dr Melanie Lee, CEO of Syntaxin, and Professor Dermot Kelleher, Principal of the Faculty of Medicine at Imperial College London. Dr Lee was particularly inspiring and spoke passionately about the challenging but exciting times for industry ahead. The second was an innovative industry panel and speakers outlined their work towards new developments and strategies in medicines research. Dr Max Little, a Wellcome Trust–MIT Postdoctoral Research Fellow at the University of Oxford and Massachusetts Institute of Technology, Chris Ponting, Professor of Genomics at the University of Oxford, and Amish Patel of IBM all outlined their roles in innovative research. The opportunity to learn about the work of IBM in drug science was particularly interesting and served again to highlight the changing nature of modern drug development research where big data and data sharing capabilities are likely to play ever-more important roles.

If the take-home message of the workshop thus far had been ‘collaborate or die’, then the message of the third and final session was ‘make the most of opportunities’. Focusing on overcoming issues regarding flexibility and mobility between sectors, speakers Mr Luke Devey, Clinician Scientist Fellow at the University of Edinburgh and GSK Espirit Associate 2013, Professor Ray Hill, Visiting Professor of Pharmacology at Imperial College London, Dr Christopher Lamb, TMAT Fellow at Newcastle University, and Dr David Fox, Science Associate at the Royal Society of Chemistry, all spoke of their experiences of moving in and out again of industry. All emphasized that both sectors prize excellent underpinning science, excellent researchers and outstanding relationships and that it is vital to ‘go the extra mile’ to establish diverse links. The workshop ended with a discussion session and final opportunity for networking.

So, although we may not yet have eradicated the so-called ‘great divide’, it seems to be narrowing to the point where we can hop – or perhaps take a running leap – across it.