

Catherine Quinn, Oxford University Research Services

A developing career

"With a language degree from Birmingham, I did a post-graduate degree in the US, at Ohio State University, then joined the University of Maryland's European Programme, initially as a lecturer. I ended up in the mid-1980s working for the university's head European office in Heidelberg, as an administrator for foreign language courses across Europe and for Maryland's programmes in the Benelux countries. None of this had anything to do with IP or entrepreneurs."

"After returning to the US again for a short while, I applied in 1991 for three UK university posts, was interviewed for all of them and offered three jobs – all in the same week. I chose the job at Oxford and have been here ever since."

Oxford University

"I joined Oxford University in 1991, initially as assistant to the then Director of Research Support and Industrial Liaison. At that point, the office was the only part of the university 'officially' responsible for overseeing Oxford's formal relationships with industry, but of course business links were then – and continue to be – distributed widely throughout the University."

"After a short while in the Research Support function, I began to specialise in contracts negotiation, learning a great deal about the management and exploitation of IP as I went along. This experience led to an appointment as Head of Contracts, which I combined during the mid-to-late 1990s with policy work in other parts of the University. By 1998, I felt ready to move into a senior post, applied for the job of Director of Research Services, and started in that job in January 1999."

Widening experience

"In the early 1990s, Isis had very limited resources: just a Managing Director and two administrative assistants. It was very different then to the Isis of today, largely because the University had not at that point invested significantly in the company as it does now."

"I had already dealt at first hand with the setting up of the first spin-outs, but in the early days of companies like Oxford GlycoSystems (later GlycoSciences), PowderJect and Oxford Biomedica, the University's role in the spinning out process was largely around disentangling the complexities of Background IP, licensing the IP into the company, sorting out consultancy arrangements for the key academics, and agreeing the equity-sharing arrangements. We had no resource to help find management or investment, which was left largely to the researchers themselves. I remember in my first term in Research Support a young academic called Steve Davies contacted the office with a request to help him sort out the rights to some patents that might be needed by a company he wanted to set up. He had already found investors and needed to sort out the University relationship with the putative company. One of those investors turned out to be Tim Cook, later Managing Director of Isis, and that spin-out company evolved into Oxford Asymmetry."

"Oxford Asymmetry first brought Tim and me together. When, some years later, he came to see me to talk about a possible role directing Isis, we talked at length about the complexities – and the potential – of driving technology transfer in a university like Oxford, but he was brave enough to take on the role, came to Isis in May 97, and has been a runaway success ever since. The closeness of our collaboration and the very strong mutual trust we've established in our roles have helped us enormously along the way."

Transferable skills

"You don't need training in contract law or filing patents for my job. What is necessary, in my view, are the ability to communicate, a reasonably analytical mind to help solve problems, and common sense. It also helps to see the importance of forming and maintaining relationships. The staff in my office learn something of contract law, but we don't pretend to be lawyers, and we certainly call

on our professional specialists in the University's Legal Services Office when we need help. In the early days of Research Services, we tended to hire people who were simply very competent all-round administrators - good at drafting and could be developed into negotiators - but the various functions in the section have become so very specialised over the past decade that I'm now looking to hire and train up post-docs with industrial experience who can communicate with research scientists. Commercial skills are not difficult to acquire if you have the right attitude and you have someone to learn from. We've all learned a lot in my section from each other and from colleagues at Isis and in the professional field."

My role

"Within the University's Central Administration, I report to the Registrar, but work very closely with Isis which puts every spin-out proposal together very skilfully. Each proposal is assessed from several angles: Isis leads the way, but they seek input from colleagues in the University such as the Director of Finance (Giles Kerr), on Background IP rights (from a specialist team in Research Services), and on the legal side from the Isis lawyers, who report to the University's Director of Legal Services (Jonathan Anelay)."

" Movement towards the completion of a spin-out can happen very rapidly after what might seem to be a long period of gestation. However, the checking of IP ownership rights and obligations will already have been covered when the proposal begins to near fruition because of the systems that Isis and Research Services have developed together. Jonathan Anelay is also in the picture, as his staff prepare the legal documents for Isis and the University. One of our very major concerns during the IP background checking process is to ensure that we have looked after the interests of any research sponsors who might have supported the research which led to the IP going into a spin-out. This will generally entail their receiving a share of the University's licensing revenue and possibly equity too, depending on the circumstances. We also ensure to that any consultancy or non-executive directorship arrangements for founder academics don't conflict with the University's or sponsors' requirements."

"This process is now very well-honed, thanks to Isis's success over the past few years, and continues generally to be very smooth, but inevitably every spin-out will demand something a little bit different. Isis's spin-out business has picked up since the early years, very much because researchers have seen others being successful. The entrepreneurial culture in Oxford is well and truly established."

Funding spin-offs

"Should the university put actual money into any spin-off? - is a difficult question. For years the University acquired shares in spin-outs but rarely paid for them other than in terms of the injection of IP. But those were ad hoc arrangements and spin-outs now have some internal possible sources of funding."

"First the Isis University Investment Fund provides early-stage money, to develop a technology. That is internal university money, replacing governmental seed corn funding through the University Challenge Fund. As that faded, but we created our own equivalent fund, giving grants of maybe £250,000 to finance early proof of concept work."

"Second, the Isis College Fund, managed by Quester, aims to help spin-outs with second-round investment. From a starting fund of around £11M, most of that is now invested."

"The VASTox case mentions the activities of the financing company - IP2IPO - which invested in Oxford's Chemistry Research Laboratory in exchange for a share of the University's equity and licensing income from companies spinning out from Chemistry."

"To check the University of Oxford's policy on IP, go to the website, look for Research, then Research Services, then follow policy to IP policy, and you'll find it."

Who handles patents?

"Isis holds the University's patent budget and invests over £1M per year in protecting these IP assets. All requests for licensing patents filed by Isis are directed to Isis, but often the licensees need the technology to be developed within the University and arrange for this work to be done under contract with the University. Those relationships are negotiated through the contracts specialists in Research Services, who will custom-build the development contract so that it works in parallel with the licence of IP from Isis.

Who handles IP?

"Research Services deals with the licensing of IP *within* a research relationship with a sponsor. When a company wishes to fund a piece of research in the University, dealing with the IP outcomes is part of the contractual negotiations with Research Services, along with issues about academic freedom, finance, liabilities for the research, etc. However, where the IP arises from work in which the rights aren't already pre-negotiated, this is dealt with by Isis, which assesses the commercial prospects for the IP, files patents, prepares market strategies, and licenses it. Where Isis manages the IP, Research Services' role is to check the Background rights and to untie any strings (i.e. by checking the University owns it, gathering consents and assignments in). In 2000, the University finalised its current IP policy - set out on the website. Like most employers, the University claims certain rights in IP developed by its employees and students, but – very importantly - it doesn't lay claim to books or scholarly articles. Research Services always establishes the ownership position before Isis spends significant money on exploitation, or gets near signing deals."

"Although we encourage most researchers to go straight to Isis, one of the first things the Isis project managers do is to ask them to fill in forms which are then sent to Research Services to help us make the proper checks. These checks are carried out by a dedicated team which are funded through the University's grant from the Higher Education Innovation Fund. It's the only university IP due diligence team in any university in the country, as far as I know, and it works well."

A wonderful group

"In the early to mid-1990s, the relationship between Research Support and Industrial Liaison and Isis was pretty rocky, so after a formal review the University decided to put a committee in charge. The need for this tailed off fairly rapidly with the appointment of Tim and me, and later Isis's Executive Director Tom Hockaday, because we get on so well and our objectives are absolutely complementary. Once the need for a referee had disappeared, the old committee was transformed into a technology transfer advisory group, which subsequently became the Intellectual Property Research Group, which reports to the University's Council. This has been extremely successful, I feel, because it provides not only a forum in which we can discuss policy issues relating to IP, but also a sounding board for practical matters (for example, whether the University should or shouldn't assign IP, or how equity in spin-outs should be shared between founder researchers and the University, etc.) And we're extraordinarily lucky to have some very experienced, very senior people on the group, including Professors Sir Mike Brady, Raymond Dwek, John Bell, and Steve Davies."

"It's a wonderful group, chaired by Oxford's Professor of Intellectual Property Law, David Vaver. His specialist area is IP and brings a huge amount of experience as a distinguished IP lawyer and researcher to the group. The scientists don't argue with him about IP!"

"In addition, the group includes among its members a professional patent attorney, Dr Robert Pitkethly, also a lecturer at Oxford's Said Business School, and the University's Professor of Applied Ethics – Julian Savulescu. The breadth of knowledge and experience is really very impressive."

"So Tim and I get on with our work, but if we have new ideas about doing things that are tied to the University's IP policy, need a sounding board in connection with IP-related issues, or feel that a difficult problem might be solved with the expert advice of the group, we can propose a paper to IPAG for discussion. It's a wonderful forum for discussion of these matters, and as far as I know the only such formal university committee in the country. It shows just how seriously Oxford takes its IP, and how it thinks carefully and consults before making any important decisions in this area."

Consultancy

"In 2000, Tim and I set up Oxford University Consulting Ltd - a sister organisation to Isis, with Professor Raymond Dwek its first chairman, and an ex-Isis project manager its first MD. Its role is to help academics to source and manage personal consultancy. As its work was linked closely to that of Isis, it was decided quite quickly to wind it into Isis, and it's now the Isis 'third stream' activity and doing very well. Any company needing advice or consultancy from the vast range of expertise at Oxford should approach Oxford University Consulting to find who in the University can help it. We encourage academics who want to do consulting but don't know how to start, or who want to earn proper commercial rates for consulting, to register with them."

How big is the operation?

"With about 50 people now in Research Services – and about 40 in Isis – Oxford's two-sided 'knowledge support and transfer' operation is very well-resourced compared to other universities'. Research Services is being asked to branch out into new areas (research compliance and clinical trials management), but our relationship with Isis is still integral to what we do. Both Isis and Research Services are very much involved in policy issues and are represent at the national level on a number of groups."

Conflicts of interest

"The potential for conflicts of interest in any number of scenarios is very much on our minds these days, and perhaps especially so where spin-outs are concerned. These companies involve University IP, the academic inventors of which will hold equity and often wish to act as non-executive directors and consultants. If those companies then provide sponsorship to their academic groups through research contracts, there's a whole web of interests which we have to make sure are well managed and don't come into conflict. To help oversee and manage all this, the University has devised some very clear rules on the holding of outside appointments and on avoiding conflicts of interest. All potential conflicts (or at least the ones of which we're aware!) are sent to the University's Committee on Conflict of Interest to ensure that the issues are aired and, to a large extent, that both the University and its employees are properly protected.

Like some US universities, our process is strict. To apply for a research award or work under a research contract, a researcher must complete a form highlighting whether he or she has a personal interest in the sponsor through, for example, a consultancy, an equity holding or a position of authority (say, if the academic is a trustee of a charity which is being asked to make a grant to fund his or her research). If the answer is yes, the case is brought to the attention of the Committee on Conflicts of Interest who determine how the request should be handled. In addition, all University employees in senior positions (eg Heads of Departments and senior administrators) or who want to hold research grants or contracts (Principal Investigators) have to file a declaration once a year to state what outside interests or associations they have that might impact on their work for the University.