Case study: The London Biotechnology Network – a people thing

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It all started in December 1999 after I had attended a meeting with numerous government officers to discuss setting up a biotechnology group for London. The need for a London-wide biotechnology organization had been identified in a cluster report by Lord Sainsbury (UK Minister for Science) (http://www.dti.gov.uk/CB/biotechclusters/index.html), but had been talked about for some time before that. The current hotbeds of biotechnology around the UK in Cambridge, Oxford, Scotland and the northwest of England had developed regional biotechnology bodies, which had helped to promote the business in these areas. However, London, despite being a European centre for medical research, did not have such an organization. In fact, no one knew who was doing what, if anything, in commercial biotechnology in London.

Although the meeting had been full of good intentions, there had been no resolution. However, the chief executive of London First (London, UK; http://www.lfc.co.uk), Stephen O'Brien, clearly wanted some action. It was then that I offered to take it on and run a network for London. After only a brief discussion, we came up with a plan. This would be twofold: a select meeting of biotech senior chief executives, key academics, venture capitalists, lawyers and senior government, followed by a launch event of some kind.

I took the job on because I thought I had the appropriate background, having started life as a cancer research scientist in the early 1980s at Sheffield University (UK). After making my mark on *Index Medicus*, I moved on to working in the UK National Health Service (NHS) in a haematology department. This was followed by joining the fast-track NHS management scheme and then on to implementing Hospital Information Support Systems at Greenwich District Hospital (UK), one of three government pilot sites for healthcare informatics. This work took me into the private sector working for HBOC (Hough, Barrington, Owen Company), a US healthcare IT company based in Atlanta (GA, USA), which was probably the most important influence on my business thinking in subsequent years.

Following this, I returned to the NHS as an IT consultant helping with procurement, implementation and evaluation of healthcare systems in hospitals nationwide. In 1996 I joined London Medicine, a small, private organization set up to promote London's medical excellence overseas. After a short meeting with the CEO Barbara Dunford to discuss her vision for the company, we quickly agreed that London Medicine would be subsumed into London First. This happened in 1999, by which time we had developed a considerable medical and academic network in London.

Hence, when it came to getting a small group of influential individuals with biotech interests together, we already had a network, which was supplemented by Lady Anne Harding's contacts she had developed at London First (of which she was a founder). Lady Harding's experience in networking London's senior business figures to develop inward investment into London has been of great use.

Wates Technology (London, UK; a source of expertise that specifically serves biotech, pharma and healthcare industries) agreed to sponsor the dinner, led by Mike Beer (CEO of First Consulting, Alresford, UK; a project management consultancy that serves the biotech and pharma industries) who has headed the team that is refurbishing London's first bioincubator. Lord Sainsbury attended the dinner to give his backing and has remained a staunch supporter of our work, as have other individuals who attended that dinner.

Funding for running the network and project activities came from both public and private sources. The London Development Agency (LDA) – a local government development agency – and the Department of Trade and Industry (DTI) have both contributed to marketing of the network and some staff costs, and more importantly by funding feasibility work on proposed new laboratory facilities. Private funding has come from a variety of sources, mainly in the form of sponsorship of numerous events and also in membership fees of our parent organization, London First.

After this, we assembled a steering group of key players in biotechnology in London, with two individuals playing a lead role in our development. Glyn Edwards, CEO of Antisoma (London) has given us both time and company sponsorship, and invaluable knowledge from the industry. Stephen Whybrow, a partner of the law firm CMC Cameron McKenna (London) has added his creativity in developing the monthly meetings.

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In naming and branding our activities, both of our names – the London Biotechnology Network and BioWednesday – were important. The network's name contained the three key elements of our business and would leave no doubt about our purpose. The BioWednesday name for our monthly meetings was cribbed, in part, from the business organization First Tuesday – a London based organization for networking businesses every first Tuesday of the month – which I believe was founded in the USA.

We chose the BioWednesday name on a phonetic basis because the letter 'W' is naturally formed in the mouth after saying 'bio' and so it has proved to be a good brand. I also helped to design our logo, which, subliminally, reminds people of the London Eye – an instantly recognizable symbol of London. The naming and branding of such an organization might seem trivial, but having seen the success of London Medicine's branding, I realized how important it can be.

Our launch was held at the House of Commons (London, UK) in June 2000, where 200 of London's senior figures from the biotechnology, finance and professional services (lawyers, accountanys, consultants) attended. The event was a sell-out, which was a relief because it was difficult to gauge at this stage what interest in biotechnology there would be in London.

So what was our remit? Our basic plan was to provide the following:

- Hold monthly networking and information meetings.
- Find and develop suitable incubator space.
- Provide access to government funding and private investment.
- Provide a communications and marketing network for London's bioscience community.
- Provide free membership.

The BioWednesday phenomenon

Our monthly meetings started with the basic format of meeting at 6 pm for coffee before a half-hour presentation on a biotechnology related topic, followed by drinks and networking. Our aim was to provide a relatively informal forum for biotech companies and academic researchers who were considering forming companies to meet with the commercial world. The commercial interest would come from venture capitalists and investors, lawyers, and other support services in the industry. The meetings are held at a different location every month, some corporate, but increasingly at academic venues, such as medical schools. We now almost always hold meetings at universities or research centres for two reasons: first, scientists from the schools are much more likely to attend the meetings rather than go to a corporate venue; and second, these are often the only venues where up to 250 people can be seated for the presentation.

When we started, just over 100 people attended, whereas now we only allow just over 200 people to attend even though the demand is so great that we could probably have twice as many. Only London-based organizations are now invited on a first-come, first-served basis. With more than 250 people we have found that networking becomes too difficult, and it would lose the buzz and club atmosphere that has been developed. We started with ~200 member organizations but now have >500, making us the largest regional biotechnology network in Europe (e.g. compared with Cambridge, which has ~200). Furthermore, membership is free, which ensures that small biotechs or individual researchers and scientists can participate.

Success factors in running a biotech network

It's a people thing

Our network events are now always sold out, even though we no longer advertise the meetings on our website or anywhere else. The invitations are sent by e-mail to our membership of ~1500 people. This means that the administration of invitations, acceptances and confirmations is quick, cheap and direct. We monitor the mix of the attendees to ensure that we do not get swamped with 'professional service' companies and only allow a maximum of three individuals from such companies. Other rules include the 'three no-show and you are out' policy, which ensures that we have a good idea of actual numbers for an event and keeps the drop-out rate at 15–20%.

It is interesting to note that, in these days of sophisticated marketing and advertising, the growth in our membership and attendance at our meetings has mainly been through word-of-mouth. New members are invited by current members on the strength of their endorsements and so there is an organic growth of like-minded people. This is based on an approach by Charles McCall, CEO of HBOC (who was listed a couple of years ago as the 7th-highest-earning CEO in the USA). He instigated a quality improvement scheme within the company that staff actually bought into and improved both internal and external company relationships and communications. By investing the company's time in developing staff skills for communicating with each other and customers, he ensured that the company evolved into a much more profitable enterprise. The business of biotechnology is based on networking at several levels, whether in finding funding or partners. We try to provide a networking platform that meets both the business needs and individual human need at our events.

The healthcare community generally has a certain psyche and non-biotech people who have come to our meetings have remarked on how different they are from, for example, banking or legal gatherings where the atmosphere is more standoffish. So we try to run our events both with maximum efficiency and as much informality as possible. We encourage scientists not to dress up to come to the meetings, and we provide beer as well as wine for the networking sessions, both of which are small steps to

help foster an informality that we think is conducive to people making new introductions and starting the process of forming new business relationships.

What are the outcomes of BioWednesday?

It is difficult to quantify the benefits that companies and individuals gain from meeting and networking at BioWednesday, but the number of returning attendees is perhaps one measure. The main types of business done at the meetings are finding funding, laboratory accommodation, staff recruitment, new biopartners, and professional services, such as legal help.

The finding of funding has been predominantly at the seed or start-up business stage and mainly with business angels or those venture capitalists who specialize at the smaller end of the market. We do put people together with funders for larger sums, but this is generally done at more formal investor meetings or directly with individual venture capitalists.

Finding laboratory accommodation in London has long been a problem, partly because there had previously been no central body to go to for this information. At the BioWednesdays, we get the companies together with the small number of parties that are offering space, or we at least make them aware of facilities. Evidence of this marketing can be seen at the London Bioscience Innovation Centre, which has a queue of potential tenants, a good proportion of which have come through recommendations at BioWednesday.

Recruitment is another area where BioWednesdays have been successful, either through agencies attending or, more commonly, through word-of-mouth at the meetings. Most small, and indeed larger, companies are on the lookout for new partners and these relationships have been started at BioWednesdays.

Finally, BioWednesdays have proved a good place to find professional services, such as legal help, from firms that specialize in bioscience. One of our legal sponsors of a BioWednesday, for example, has now taken instructions from one of our host universities to act for some of their spin-out companies.

So, in conclusion, the evidence for benefits comes from telephone calls and e-mails saying that attendees have had new leads, or are about to do a deal, and so on. It cannot be quantified, but something is clearly working!

Developing new laboratory premises

The reason that there has not been a great deal of commercial biotechnology or growth of companies in London has largely resulted from the lack of laboratory space for companies traditionally spinning out of universities and medical schools in London. With land values so high in London, it has not made economic sense to build laboratories, because the return from renting such properties would not be anywhere near that for developing houses, shops or car parks. Consequently, small companies tend to move out to Oxford, Slough or Cambridge, resulting in upheavals for staff (if they indeed went with the company at all), and delays in the company's business plan.

Now, however, there are two reasons why commercial biotechnology facilities can be developed. First, there is a huge market demand at present from both small and large biotechnology companies; even the small ones can pay a commercial rent because they are much better funded. Second, and perhaps more important, is that universities, medical schools and the NHS have land and/or buildings that they wish to convert for research use; they see providing commercial biotechnology facilities as a good income stream to supplement other activities.

The first incubator for commercial biotechnology is now up and running at the Royal Veterinary School in Camden (London, UK), called the London Bioscience Innovation Centre. This has given other academic institutes more confidence in developing their own facilities and the London Biotechnology Network is currently involved in five other such developments across London.

To find out how much laboratory space was needed and where, we surveyed all of the biotechnology companies in London and produced a report containing two- and five-year demand for space and the preferred locations. The locations most preferred were either central London, close to their academic parents, or west London where many staff live but it is still close enough to get into central London. Consequently, the new developments are mainly in these areas of London. Our role in these is getting them to a stage where they become real projects, and so with funding by the LDA and DTI, we project-manage feasibility work to assess the financial risk of such developments. The majority of these developments are for small companies – so-called 'incubators' – but there is ongoing feasibility work at Harefield Hospital that we hope will turn into London's first medical science park. Considering London's huge medical research base, it is long overdue.

The network's other functions include an information service about London's biotechnology sector and promotional material, such as a map of all London's biotechnology companies (currently 70) mapped against the major academic research centres (see http://www.londonbiotechnology.co.uk).

The future

In December 2001, we ran a major exhibition and conference in London that showcased London's biotechnology strengths, with 700 delegates and 70 exhibitors. Sir Richard Sykes, Chairman of GlaxoSmithKline (Greenford, UK), Sir Chris Evans, CEO of Merlin Ventures (London, UK), and Professor Lord Robert Winston from Hammersmith Hospital (London, UK), all spoke about their work

and the strength of London's biotechnology base. It shows how far the network has come in just two years and we will be running the conference again in December 2002.

We are also increasing our efforts overseas in looking for new partners for our London companies and researchers. In 2001, we spent a week in Germany meeting with European biotech and support companies and are planning two further trips to Germany with the inward investment arm of London First, to meet not only potential partners but companies who might locate in London. We already host inward missions from the USA, Canada, Japan and Europe, and we envisage this work increasing, along with undertaking increased overseas missions ourselves. We will also continue to run small investor meetings, where London biotechnology companies present to a mix of venture capitalists and business angels.

If the sector continues to grow at the current rate, there could be ~100 biotech companies located in London in the next two years or so – a significant cluster for the UK. Supporting these companies in helping them find funding, accommodation and new partners will continue to be our goal, providing practical help for the biotechnology community in London.

The *Discussion Forum* provides a medium for airing your views on any issues related to the pharmaceutical industry and obtaining feedback and discussion on these views from others in the field. You can discuss issues that get you hot under the collar, practical problems at the bench, recently published literature, or just something bizarre or humorous that you wish to share. Publication of letters in this section is subject to editorial discretion and company-promotional letters will be rejected immediately. Furthermore, the views provided are those of the authors and are not intended to represent the views of the companies they work for. Moreover, these views do not reflect those of Elsevier, *Drug Discovery Today* or its editorial team. Please submit all letters to Rebecca Lawrence, News & Features Editor, *Drug Discovery Today*, e-mail: Rebecca.Lawrence@drugdiscoverytoday.com

Dynamite approach to delicate complex scaffolds

When Alfred Nobel invented dynamite, he essentially managed to meet two contradicting needs. A useful explosive needs to be safe to store and handle but concurrently highly dynamic and absolutely destructive when required. The famous solution to this problem could be compared to the development of the safety-catch principle for solid-phase peptide synthesis by George W. Kenner in 1971 [1].

The strategic integration of synthesis and purification is now widely recognized as a prominent advantage of the use of polymeric supports or other solubility-control auxiliaries in organic synthesis [2]. Yet, the mild and selective removal of products from these temporarily attached solubility-modifying groups is an important prerequisite for the successful construction of complex molecules in multistep synthesis sequences. Therefore, an anchor group in polymer-supported organic synthesis should be stable under a wide range of reaction conditions and be able to withstand attack by nucleophiles or protons. Simultaneously, the linker must allow mild cleavage conditions at the end of a given synthetic sequence, to neither destroy valuable product nor to lose material by incomplete removal from the support used.

Kenner solved this problem most elegantly. The growing peptide chain was attached to a sulfonamide anchor via an acyl sulfonamide functionality. The resulting immobilization is robust to treatment with strong bases or acids. The deprotonation of the acidic construct leads to an effective protection against nucleophilic attack, superior but mechanistically comparable to the stability of the phosphate backbone of oligonucleotides. At the end of a peptide synthesis sequence, alkylation of acylated primary sulfonamides yields *N*-alkylated derivatives that lack the ability to release a proton and thus can be cleaved by nucleophiles under mild conditions. In cases where the product synthesized does not enable activation by alkylation without being alkylated itself, alternative procedures, such as a Mitsunobu protocol, have been suggested [3].

However, the yields obtained for peptide synthesis using the Kenner linker together with racemization problems did not lead to a successful career of this concept in peptide synthesis. There are, however, niches for this construct in the synthesis of cyclic peptides, in chemical ligation strategies or as surprisingly selective *N*-acylating polymeric reagents [4].

A remarkably elegant refinement of the safety-catch principle can be achieved when the activation step is not

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