Employment and management trends in the biotechnolgy industry

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Abstract This paper takes a look at the major influences on the biotechnology industry and how they are currently affecting employment and management trends. It takes a brief look at the impact of the economic environment, the pharmaceutical industry, the role of geography, the employment stages faced by the industry and the management issues. The dangers of making predictions are obvious: remember that when IBM was asked in 1947 how many computers the world would need, they thought five main frames would do it.

The biotechnology industry is still in nappies. The human genome was only published in February 2001 and we do not really have any concept of where or how fast this will take our scientific knowledge. So, while buffeted by the winds of short-term political and economic agendas, there is an undercurrent of an industry that is learning and growing up.

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Introduction

In an economic environment where Heidrick and Struggles in the USA have made significant redundancies, McKinsey's have made their first ever cash call on their partners and the *Financial Times* is commenting on 'Two Speed Britain',[1] it is a paradox that in biotechnology conferences on both sides of the Atlantic, there is a universal cry of 'we cannot find the people!'

Is biotechnology in its own particular eddy in the main stream of economic downturn? Probably not, but there are underlying issues that affect recruitment patterns in frontier industries.

The global economy

In the six to ten years it takes to bring a new drug to the marketplace, it is unlikely that it has not seen a hiccough or two in the financial markets. Small public biotechnology companies ride such tidal waves as 'We have got a technology-driven set of shock waves coming out of the US' (James Hall, Accenture). What he is referring to, of course, are telecommunications, electronics, Internet and software companies, such as we have seen with Marconi[2] but, tarred with the same brush, biotechnology stocks suffer.

It is interesting to look at the current economic downturn, because it is not the

first and will not be the last and this industry learns and changes each time it comes through economic dificulties. So what does this latest downturn mean to the biotechnology industry?

Whether post- or pre-IPO (initial public offering), it will mean slowed growth. With cash hard to come by, all companies will be watching costs, which will mean that only absolutely necessary recruitment will be done. It is unlikely that work will be entirely stopped on projects but progress will be slowed. Mid-sized biotechnology companies that are running out of cash will freeze all recruitment.

In the smaller biotechnology companies, these days not known for their profligate recruitment policies, if they have funding, they will recruit. Interim management is beginning to see increased use of its services as companies decide to buy skills on an as-needs basis only.

Across the board, downsizing will continue for companies that hit the wall with poor clinical trials.

In the USA, biotechnology is either highly concentrated in areas such as San Francisco, placing high competition for even support staff, or is in states that aspire to have a biotechnology cluster, such as Michigan, which are having problems attracting would-be biotechnology stars to their area. However, despite the downturn having dug its heels in a little harder in the USA, recruitment in biotechnology is continuing.

Will there be fewer start-ups? Maybe, but there is an issue with larger venture capital funds funding only larger biotechnology companies, rather than providing seed capital. There is currently a gap in the European market for seeding biotechnology companies and it is only partially supported by governments, small funds, research institutes and universities. Start-ups have been slowing in Europe for some time. However, the need for more productive pipelines means that funding is increasingly forthcoming from pharmaceutical companies and other biotechnology companies.[3]

Will it mean fewer IPOs? Certainly, they are stacking up in Europe as we speak. But as few venture capital companies see IPO necessarily as an exit any longer, and the larger funds, such as Apax,[4] mature into private equity, providing larger, longer-term investments prior to IPO so the pressure to go to IPO is reduced. Much will depend on the length and depth of the recession.

It may slow down the ability of European companies to form or manage alliances and joint ventures. However, the biotechnology–biotechnology deal is increasing and is vital for all biotechnology companies to grow. This places demands for management skills and international skills even higher on the list for biotechnology senior management.

What has been learned over this downturn? The recent vagaries of the stock market have had a significant effect on senior level awards packages in the biotechnology market. Potential CEOs, senior management and scientists are less willing to take stock and stock options as such a large percentage of their package. Cash now needs to play a more important role both in the USA and Europe.

And if one ever believed that stock options held senior people in the company, then there are people out there sitting on under-valued stock options whose incentive to remain loyal to the company is severely reduced. The real danger here is that this engenders disappointment and a sense of failure: keeping people relies more on good management than just on the value of stock options, a subject this paper returns to later.

So what about the current cry that there are not enough people? It means there are not enough 'stars' particularly in CEO, technical and business development functions and this is a feature of an immature industry. But in a pioneering industry, there will always be too few leading-edge people. As the industry matures, there will be a degree of 'recycling' of this CEO and technical talent. Business development could become a freelance discipline, in the same way as computer programming.

In the longer term there is an ever-

increasing need for talent in the biotechnology industry and, regardless of the current economic environment, the industry should work on its ability to identify, recruit, manage, develop and retain the best people it can.

The pharmaceutical companies

We have probably not yet seen the last of the consoldiation activity in the pharmaceutical sector, although the current climate has slowed this down. The real challenge for the pharmaceutical sector is 'How do you double your size without killing the creativity?' (Sir Richard Sykes). GlaxoSmithkline is experimenting with an interesting structure of small, entrepreneurial centres of excellence in its R&D Department that will encourage this creativity.

The fact remains that for the foreseeable future, the biotechnology industry will be a significant pool not just for promising drug leads but for platform technologies, drug delivery systems, diagnostics and even medical devices.[5] The market for biotechnology's products is not going to disappear overnight.

The consolidation process of large companies has produced many people now employed by the biotechnology industry, not just from those who have been made redundant but from those who have an increasing dissatisfaction with the way that large companies operate.[6] While it is likely that this sector will continue to be a source of employees for the biotechnology industry, the supply is not inexhaustible and not everyone is cut out for biotechnology. To be successful in biotechnology requires among other things:

- adaptability;
- communication skills;
- vision and lateral leadership ability;
- real and realistic commercial awareness (preferably on an international level);
- tenacity (and the ability to stay cool when under fire);
- sense of humour; and
- last but not least, the 'Love of the Fight'.

> When you have your darkest hour and you feel that your company can produce this drug but 'who the hell wants to' you have to come out still fighting.

These are skills that are not always apparent in big pharma employees.[7] Biotechnology has experienced significant problems in the past when 'big company' practices just do not translate into a small company environment. We, in biotechnology, have heard all this before but there is still over-emphasis on recruiting solely against past experience instead of focusing equally on core competencies.[8]

The role of geography

Geography has an interesting role in employment trends in this industry.

> Economic geography in an era of global competition, then, poses a paradox. In a global economy – which boasts rapid transportation, high-speed communication and accessible markets – one would expect location to diminish in importance. But the opposite is true. The enduring competitive advantages in a global economy are often heavily local, arising from concentrations of highly specialised skills and knowledge, institutions, rivals, related businesses, and sophisticated customers. Geographic, cultural and institutional proximity leads to special access, closer relationships, better information, powerful incentives and other advantages in productivity and innovation that are difficult to tap from a distance.[9]

This is interesting from two aspects:

- Clearly biotechnology clusters are not only proving to be extremely effective in identifying and funding start-ups but also in allowing these businesses to access supporting services, technologies, facilities and alliances. They also mean that it is quite possible, if one biotechnology company fails, there is likely to be another job nearby, without it being necessary to move husband/wife/family to another area – an aspect that should not be underestimated when considering locations. This facilitates

cross-pollination of technologies and ideas. This is apparent not just in the UK but in France, Germany, Italy and, of course, the ultimate California, where the decline of Silicon Valley has brought incredible benefits via bioinformatics and in-silica clinical trial systems to Bio Valley.
- Interestingly, clustering has only a limited impact as biotechnology companies mature. As they seek complementary technologies, biotechnology companies will go to where that technology is to be found. This has led to greater internationalisation of biotechnology than was ever anticipated. It is also interesting to note that despite Germany's legendary support of a new biotechnology industry and its high-profile clusters, as products move to clinical trials, not everything the companies need in order to grow is to be found in the cluster and, ultimately, their sights turn to the USA.

However, so strong is the attraction of this clustering, that other countries around the world, even other states within the USA itself, are finding it extremely difficult to attract senior people to leave these locations, as was made abundantly clear in the recent BIO2001 conference in San Diego.

Geography also has one other significant impact on employment trends. As biotechnology companies mature, it will be essential to 'globalise', to form alliances with competing and complementary technologies, wherever they may be. The management skills needed to accomplish this successfully raise the requirements for senior management.

The employment stages faced by the biotechnology industry

For young biotechnology companies in general the following stages are needed:

- finding a start-up CEO if the founder is not going to do this job;
- finding a CEO after the founder has been persuaded not to do this job;
- finding an R&D director, development experience not being usual among founding scientists;
- finding a reputable and experienced finance director;
- a human resources person may come next;
- a project manager.

Then as the company matures, it will need the following skills but not necessarily on a full-time basis. However, finding the right calibre people at the right price is a problem:

- regulatory (maybe needing Food and Drug Administration, FDA, experience);
- intellectual property/patent advice;
- quality/manufacturing;
- supply chain;
- business development;
- marketing.

Interim management often fills these functions, as well as increasingly, the 'stars'. People of the highest calibre can be in-sourced on an as-needs basis, providing direction and support for the existing management team members.

This is followed by the need for:

- IT/bioinformatics;
- specialist support research and development scientists;
- medical directors.

This is without the middle management and support staff, which in these cluster areas are also at a premium. There is also a limit to the amount of staff it is practical to recruit in any one month. The current estimate is that more than five people in one month can become difficult to assimilate.[10]

The larger biotechnology companies have to face the demands of eventual IPO and ensuring there is a suitably heavyweight management team.

The management issues and trends

The management issues are clear to identify:

- dealing with founders' unrealistic expectations;
- dealing with dreams and emotions;

- there is a need to define the organisation structure as it grows, defining clearly the roles within that structure – rather than letting it just evolve;
- sometimes, there is a need to say 'goodbye' to founding team members;
- managing the culture change moving out of research into development;
- ensuring the company becomes commercial and accountable;
- integrating the scientific and commercial needs;
- dealing with the lack of investment in management;
- ensuring there is a shared vision is key;
- finding alliances, joint ventures, merger and acquisition targets and managing these;
- raising funds with the 'right' investors;
- dealing with shareholders, institutional investors, the markets.

This list is not exhaustive. However, one of the management trends that is likely to impact greatly on future recruitment in this sector is that of life–work balance and the way in which that is managed. This is not confined to biotechnology but is already highly evident.

> We have shifted into the age of human capital. What an organisation produces is often nothing more than what comes directly out of the heads of its employees, which makes those employees valued equals rather than just hired help.[11]

If anything signals the fact that the old 'command and control' management style is dead, it is this, but this quote comes from a recently published survey report in the UK on attitudes towards the life–work balance. It is interesting to note from this report that while flexible working practices are now becoming the norm and the 'long hours' culture is improving, there is still perceived to be a huge workload pressure. This is because we are still trying to graft new practices onto old cultures.
Overwhelmingly, the managers surveyed wanted new ways of working, including:

- more speed, transparency and flexibility;
- faster decision-making.

Parents are no longer willing to miss their children growing up and the following quote is quite telling:

> Our skills – and the means of applying them – are portable and eminently marketable and demand for them exceeds supply. We aren't prepared to put up and shut up any more, especially since the traditional rewards of lifelong security, steady progress and a gold clock are no longer available to buy our uninterrupted service and compliance.

This is also reflected in *The Economist* report on 'Career evolution' from New York and Palo Alto quoted earlier so the USA is beginning, despite (or perhaps because of) a long period of full employment.

What this means is that people expect the company culture to fit with their need for creativity and innovation and if the company does not involve them, trust them and have adult/–adult relationships with them, then stock options, individually tailored packages and flexible leave will count for nothing.

'Situational loyalty will replace company flag waving' (Prue Hoppin of Drake Beam Morin, Washington, DC).

Bill Gates said 'You know, it's kinda romantic to sleep under your desk . . .' Only if you are Bill Gates.[12]

Conclusions

Several conclusions may be drawn from the above:

- Of course, economic downturn will affect biotechnology recruitment in the short term but there are issues that may be blamed on the recession but are in fact due to more fundamental changes in the industry itself, such as funding policies and practices and increased knowledge of biotechnology among the investment community.
- Funders will need to take a longer-term view in a recession or risk losing their investment totally.
- Pharmaceutical companies will continue

to provide people for the biotechnology market but not all of them will be suited to small company, entrepreneurial life.
- Pharmaceutical companies will continue to need to source drug leads and technologies from the biotechnology sector, ensuring a ready market and potential investment partners in the long term.
- Geography will play an important role in successful recruitment and it may not always be wise to be lured by development agencies into areas with no other biotechnology or technical presence.
- Employment stages in biotechnology are not easy to manage but the recruitment process needs to become more planned and sophisticated. Growing a company is complex and ensuring the organisation structure continues to be planned, rather than evolving by accident, is a significant role for biotechnology leaders.
- Management of biotechnology needs to become as leading edge as its science if it is to attract and retain the best people in the industry. This will mean management being seen as an investment in the same way as the science and not just a cost centre. And unless the skills of this touchy, feely, icky stuff called 'management' are improved, then biotechnology companies will continue to make-do with an unsatisfactory level and calibre of staff.

Given the long-term agenda for biotechnology, the outlook is good.

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