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What You Need to Know About Biotech

This article aims to provide a brief introduction to the commercial aspects of biotech in the field of healthcare for those working within it or for investors. In the course of providing patent services in the biotech and pharma sectors we have interacted with tech transfer organisations, research companies and investors, and participated in discussions concerning strategy. The contents of the article are based on that experience, and we hope will be of assistance in formulating a commercial strategy, as well as in formulating patent strategy. Our experience mostly comes from working with European organisations and so the specific information given in the article reflects the present picture in Europe, and to some extent the US.

The Characteristics of the Biotech Sector

Biotech has many sectors each with their own commercial characteristics. This article only relates to the healthcare aspects of biotech, and therefore does not, for example, discuss agricultural or industrial biotech. The healthcare sector can be broadly divided into therapy and diagnostics, both of which overlap with medical devices. Commercial strategy will differ in these two sectors and investors will need to be aware of the different risk profiles and the different time frames for product development and regulatory approval. The most lucrative area of biotech is drug development. However this is associated with very high risk. Figures of 85% failure rates for research companies in this area are quoted, and it is clear that even seasoned industry experts are unable to predict which companies will succeed. Further it can take 10 to 15 years to develop a drug which is a timeframe that is unacceptable for many investors.

In the eyes of many people biotech is a sector which has failed to deliver on its promises, with the development of new products being much more complicated than envisaged. However the world's top-selling drug, humira, is now a biologic and there are still many unmet clinical needs waiting for biotech solutions.

Key Organisations

The key players in the biotech ecosystem are academic researchers, biotech research companies and large pharmaceutical companies (big pharma), with venture capitalists being an important source of funding for early stage biotech companies. Essentially many biotech companies have the strategy of getting product development to the point where big pharma will either acquire them or at least fund them. Therefore the expectations and behaviour of big pharma is a key consideration when formulating strategy in the sector.

Trends

It is important to know what the trends are in biotech and the present thinking of the different players. Big pharma is presently looking to externalise its research and it sees biotech companies as a source of innovative research that it can tap into. However big pharma is now much more cautious and will want to minimise risk in the way they interact with biotech companies. That means they are more likely to be sceptical, and if they are interested they will proceed by collaborating rather than acquiring. Biotech companies cannot now expect easy or quick exits, and will need to ensure that they can 'go long' if needed.

Venture capital funding is presently also difficult to get, and in the UK that is particularly the case. This means that at the moment the environment is pretty challenging for early stage biotech companies. However there seems to be a new optimism emerging in the US biotech sector which could also spread to Europe.

Different Models of Investing

It must be appreciated that there are many ways of investing in biotech. At the moment experiments with crowdfunding seem to be having some success, but this is probably not an appropriate way of investing in something as complex and risky as biotech. Venture capital investment is usually at an early stage, often investing in small biotech companies. However it can also be at pre-startup, where an academic may be funded to carry out initial experiments and file patent application.

The Sums and the Hard Reality

Whilst investing in the biotech sector is risky and there are many unknowns, investors should still be aware of the available statistics. In the US where the company is successful one can expect an investment of $20-30 million to give a return of around $140-150 million. Unfortunately the returns in Europe seem to be lower. What seems clear is that investing more than $20-30 million in the company will often not give a higher return. It is also clear from recent performance in the sector that few companies will give astronomical returns, and it is close to impossible to predict which ones those might be.

Past Examples

Whilst the biotech sector is littered with examples of companies which failed, there have also been success stories. The small UK biotech company Circassia has been able to raise tens of millions of pounds in several funding rounds in recent years. Thus investors are prepared to put large amounts of money into small European biotech companies.

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Patents

Patents are of course a key aspect of commercialising biotech research, and often represent a substantial part of the value of a biotech company. Companies need to ensure that their patent strategy is in alignment with their commercial strategy. Thus all the relevant parts of the company need to contribute to the decision-making on the patent portfolio, and not just the patent attorneys.