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Early stage and seed financing for biotechnology start-ups: A UK perspective

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Abstract

It is a tough climate in which to be raising early stage investment but there is funding available for the very best of British biotechnology. This report outlines several sources of funding that the author has found most relevant to early stage biotechnology companies. The competition for the limited funds is harsh so it is vital that biotechnology entrepreneurs choose the right sources of funding and approach them in the right way. The final section briefly outlines how companies can 'tilt the balance' in their favour and learn to move from just being scientifically convincing to becoming a commercially convincing investment opportunity.

INTRODUCTION

There are fund managers and private investors in the UK who are currently seeking to make some good biotechnology investments. It is a complete myth that there is no early stage financing for biotechnology and surprisingly biotechnology is in a better condition then many other sectors.

It is important for entrepreneurs to see the investment situation through the eyes of potential investors. These are the people you are trying to impress, so it makes sense to understand their point of view. Private investors invest in an ad hoc fashion and it is virtually impossible to make any meaningful statements of what private investors like and dislike. It is, however, possible to give some rules of thumb.

THE BUSINESS ANGEL

Private investors usually invest only 5–15 per cent of their total investment portfolio into risky start-up companies. The implications of this statistic are significant. It shows that the majority of private investors (often known as business angels) are risk-takers who bet only what they can afford to lose. It also shows that the amount available to invest in high-risk opportunities is directly proportional to the health of their investments on the wider stock markets. For example, say an investor invests 10 per cent of their total investment portfolio in early stage biotechnology. In order to invest £500,000 in to a single company, their total investment portfolio would have to be £5m. Bearing in mind that investors tend not to put all their eggs in one basket and would ideally put a similar amount in, say, five companies their total investment portfolio would have to be a massive £25m. Put simply, there are not many individuals in the UK who have a total investment portfolio in this region. People of this wealth are few and far between and those who feel confident in investing in biotechnology are very rare indeed.

It really does take an extraordinary set of circumstances to create a biotechnology business angel since the most active tend to have the following characteristics:

- the scientific knowledge to understand the investment opportunity;
- enough money to be able to afford the high costs of a biotechnology investment opportunity;

- the patience to wait for a long exit route;
- the courage to withstand the high-risk nature of biotechnology companies.

In short, finding a single private investor who is willing to put more than £500,000 into your business is going to be very tough indeed and largely dependent on good luck and very good contacts.

(Note: There are around 50 business angels networks in the UK and many more venture capitalists. To find out more see the British Venture Capitalists Association web site.[1])

SYNDICATION

Syndicates of investors are becoming increasingly common in successful early-stage biotech funding

Investors like to hunt in packs. Nothing attracts money to your business better than money. If you are seeking £500,000 you are much more likely to attract your investment from a group of individuals than from a single person. Syndicates of investors allow the rare, technically minded investor to vet the complicated science behind your business plan, making the other investors to be more confident in backing them up with money. Times are tough and investors are very wisely more cautious than they were a few years ago. Spreading the risk and investing smaller amounts, alongside other business angels, in a wider portfolio of opportunities is becoming increasingly attractive to investors.

Case Study: The Oxfordshire Investment Opportunity Network

Business angels' networks can be an effective route to syndicates of investors

The Oxfordshire Investment Opportunity Network (OION)[2] is a highly successful business angel's network focused on technology and introduces investors to early stage companies. Early in 2002 the Network created a symbiotic relationship with a local syndicate group. OION recognised that investors' investment preferences were changing and they were investing more cautiously in a wider portfolio of companies. More established investors were almost fully invested and new inexperienced investors were reluctant to become lead investors in their first deals.

The group of investors in the syndicate meet once a month in an informal setting and discuss the latest opportunities presented through OION. If a company is of interest to a specific investor the investor will begin initial due diligence (company investigation) and report back to the syndicate. If others want to join in on the deal then they are invited to invest alongside the original investor with the same investor's agreement, the same due diligence information and the same valuation. The investors not only share the costs of the due diligence and legal documentation, but also, by developing a trusting relationship with like-minded individuals, they can quickly build up a very interesting and diverse portfolio of opportunities where they have achieved good valuations due to an effective group bargaining power.

The result is that it is a great deal easier for the investors to spread their risk in a number of companies while gaining the benefits of a better valuation based on the negotiating power of the whole syndicate. The company not only achieves its aim of gaining investment but also saves time and money by speaking to only one individual while attracting investment from many.

The current economic climate is likely to continue for some time and it is likely that syndicates based on the OION model will grow in popularity in the UK.

VENTURE CAPITAL FUNDING

The key to venture capital funding is an understanding that the decision makers are professional fund managers. Their funds and their jobs rely on convincing private investors and institutions that they can manage the investment decisions better than they could do themselves. When the fund managers lose money (as many have done over the past few years) then investors soon start demanding to know what went wrong. The fund

Venture capitalists generally cannot afford to invest below £1m

Research the venture capitalist organisations in detail before approaching them

Make sure you have sound professional advice before signing a deal

managers must be able to clearly justify their reasons for investing.

Venture capitalists (VCs) therefore tend to conduct a very thorough due diligence on a company and demand professionalism to shine through in the business plan, the company strategy, the science and, above all else, the management team. Several VCs have moved away from funding early stage biotechnology and some have closed down completely as a result in a down-turn in the investment market. The remaining fund managers are treading cautiously and are therefore reluctant to take big risks. Baring in mind that almost all 'pure' biotechnology start-up companies are very risky investment opportunities, it is not surprising that only the very best are currently getting funded.

VCs are full-time fund managers who have to make a significant return in order to pay for their salaries, overheads and a healthy profit to the investors. It is generally considered economically unviable to rely on closing deals below £1m. The fixed costs of management time, due diligence, legal advice, etc. vary very little between a £100,000 deal and a £10m deal. It must be remembered that a VC's job starts when it signs a cheque over to an entrepreneurial company. The VC must make sure that the company reaches its milestones and it should bring a company that starts going wrong back on track, and do all that it can to protect investors' money. All of this work can take a great deal of time and as a result the vast majority of fund managers with a £40m fund will invest in 20 companies at £2m each rather than 200 companies at £200,000 each, simply because they do not have the vast management resources necessary to look after a portfolio of 200 companies.

If you are approaching investors then it is worthwhile doing your research. Most VC organisations and bioscience fund managers will have a web site where they will detail the kind of investments that they are interested in. It is a waste of everyone's time to approach an investor who invests only in low-technology companies when you are involved in advanced medical instrumentation. You should be able to research the profiles of specific fund managers to find the most appropriate decision maker to forward your plan to. Sending an e-mail with a weighty business plan attached to info@3i.com is unlikely to be well received.

Table 1 gives a broad comparison of the preferences of business angels and of venture capitalists. Whether you are dealing with a private investor or a venture capitalist it is of the utmost importance that you receive sound business advice. While the investors can be very flexible with the details of the investment agreement, types of shares, etc. it must be assumed that they know more about the subject than you do. Poor advice and inexperience on the part of the entrepreneur can make it all too easy for an opportunistic investor to put forward a deal that may be regretted later.

The valuation of your company is most

Table 1: Preferences of business angels and venture capitalists

Business angels	Venture capitalists
• Below £1m • Ad hoc sector interests and very dependent on the individual investor • Have a personal interest in the business • Forgiving (ie may still invest if the business plan is not as professional as it ought to be or the management team is not complete) • Very limited funds so follow-on funding is unlikely • Can be over-attentive!	• Above £1m • Very sector-specific • Insist on professionalism throughout the business • Require strong management • Insist the company has strong intellectual property rights • Insist on board position • Large equity stake • Experts in getting the most out of a deal!

likely to be open to a lively debate with an investor. Your valuation is not based just on past performance but on future prospects, and in biotechnology the future prospects of a company are particularly uncertain. There are no methods of valuation that I have come across that an investor cannot tear apart. The best bet is for a company to bring in an accountant who understands the company's technology and can value it independently. Even if the accountant comes up with the same valuation, it will be taken much more seriously if it appears to come from someone outside the company. You are also less likely to be put on the spot to justify the valuation if you can direct those difficult questions to someone more financially qualified who can talk in the same language as the investors.

Get external advice to help with the valuation of your company

BANKS

Debt finance is generally unsuitable for biotech companies

Debt finance is generally unsuitable for biotechnology companies in their early stages. Banks are commercial entities that are seeking to make a profit. The loans that they give out only give them around a 3 per cent margin. With a 40 per cent failure rate in start-up companies (of all sectors) in the UK, the risk *v* return ratio is not attractive. Banks want to see an existing income coming in to your company before they agree to the loan because they want to make sure you can pay the interest rates. If you do not have any income then they will invariably insist on some form of security to match against the loan. If you are the manager of a high-risk start-up biotechnology company then it would be very foolish for you to risk putting your house up for security. Although the banks may be happy to accept it you must stick to the most fundamental of investment rules – only invest what you can afford to lose.

SMART awards have been very effective in the funding of very early-stage biotech companies in the UK

The good news in the UK is that government has tried to encourage banks to provide debt finance by supporting the 'Small Firms Loan Guarantee Scheme'. The SFLGS is normal bank lending, under normal bank criteria but with the DTI (Department of Trade and Industry) covering 70 per cent of the loan's security (and 85 per cent if your company has been trading for two years). Loans of up to £100,000 will be supported if you are a start-up and loans of up to £250,000 will be supported if you have two years of trading. Most high street banks are willing to apply for them, assuming that your business meets their normal assessment criteria: if your existing bank says no or is being unhelpful, shop around for another bank.

Private investors and fund managers will sometimes agree to a part equity, part debt financed agreement where payment back of the loan can be on much more flexible terms than a high street bank will offer you.

GRANTS AND OTHER SOURCES OF FUNDING

SMART awards

If you are a start-up biotechnology company based in the UK and have not already applied for a SMART award then you are missing a valuable opportunity. SMART – Small Firms Merit Award for Research and Technology – are DTI grants for individuals and small businesses in England to develop innovative new products and processes. Businesses need to contact their local Business Link to apply for an award. Businesses compete for the grants, which are given for different types of project including the following:

- Feasibility studies into innovative technology. Project costs can be awarded up to a maximum of £45,000. This is available to individuals and small firms with up to 50 employees.

- Development projects up to pre-production prototype stage of a new product or process which involves 'significant technological advance'. Project costs up to a maximum grant of £150,000 can be awarded. This grant is available for firms with up to 250 employees (SMEs).

(Note: To find out more about SMART awards see the web site.[3])

Regional venture capital funds

Regional venture capital funds and University Challenge funds could help plug the biotech equity gap

A public/private partnership supported by the DTI has raised over £200m across seven English regions to invest in early stage companies caught in the equity gap. The London Regional Venture Capital Fund, for example, is sponsored by the London Development Agency, operated by VCs and will be invested in fast-growing businesses based in Greater London. The Capital Fund will make initial venture capital investments of up to £250,000, with follow-on investments up to a further £250,000 in companies at all stages of their development over the next five years.

The Capital Fund is operated by VCs London Fund Managers (LFM), a division of Yorkshire Fund Managers Limited, and sponsored by the London Development Agency (LDA). Investors in the fund include a range of banks, among them Barclays, pension funds and the DTI's Small Business Service (SBS).

University Challenge funds

The University Challenge funds represent a unique initiative between the UK Government and major research organisations. They provide early stage finance to help scientists exploit the commercial potential of their discoveries. A number of universities in the UK have access to these funds and to find out if you can apply it would be wise to consult the technology transfer department of your university.

Case Study: The Bloomsbury Bioseed Fund

The Bloomsbury Bioseed Fund[4] was established in 1999 following a successful £3m bid to the University Challenge funds. The BBSF's consortium organisations contributed a further £1m. The consortium includes Imperial Cancer Research Fund, the Royal Veterinary College, University College London, the School of Pharmacy and the Institute of Cancer Research. Although owned by the partners, BBSF is independent. When starting a business, scientists have the option but not the obligation to raise finance through BBSF and conversely BBSF does not receive any pressure from the organisation's technology transfer departments to invest in a given opportunity. This £4m fund is open to all inventive scientists related to the consortium organisations. BBSF is unusual in that it invests only in projects related to life science, including drug discovery, medical devices, diagnostics and research tools. Other University Challenge funds do not have a life science focus and will consider technology from all sectors.

The BBSF has a direct involvement in the creation of the start-up and business operations helping future founders strengthen their ideas and prepare a business plan. Only then, if the project is attractive, does it consider providing immediate finance, of up to £250,000 in a given opportunity. A key investment criterion is that a significant milestone should be reached once the seed investment is spent, so that follow-on finance is easy to obtain.

TILTING THE BALANCE

As a start-up biotechnology company in the UK you are competing not just against your direct commercial competitors, but also against the thousands of other companies fighting over themselves to convince the dwindling numbers of active investors that their company is a better investment opportunity than yours. This section looks at how to tilt the balance with investors and make them inclined to choose your business opportunity over another.

Looking good

You are trying to sell a piece of your company so it should come as no surprise that everything you have ever learnt in marketing and selling must come into force when you are presenting your plan.

Remember to 'sell' to the investors

Most important of all sales techniques is to know your customer. The people considering buying part of your company are the investors; therefore it is the investors who are your immediate customers. With this in mind it is time to go back to your business plan and presentation and see if it is really answering the questions investors want to hear.

A great deal of fundraising is down to networking with private investors and fund managers. Both are incredibly busy so you need to catch their interest in the first instant you meet them. Practise your one-line elevator pitch on colleagues and friends, with the objective of honing it down into a sound-bite that can be easily repeated. Investors talk to other investors – make it really easy for them to talk about your business.

Management and mingling

Biotech investors are elusive so get out and talk to people

Biotechnology companies are notorious for being highly technical and many investors get turned off by the management team's poor understanding of the commercial world. It is of the utmost importance to have a team that does not just have technical expertise but is run by experienced business managers who understand the commercial realities of the sector relevant to your company.

First impressions count. Spend time developing year elevator pitch and executive summary

Learn from the mistakes and successes of others by tapping in to the local networks and speaking to companies in a similar position to your own. Incubation centres are a great place to start the search for like-minded companies and it is not surprising that a good incubation centre will act as a honey pot to the local biotechnology investment community.

Case Study: London Bioscience Innovation Centre

The London Bioscience Innovation Centre[5] is London's first significant purpose-built facility for bioscience companies. The aim of the centre is to provide the first step for a biotechnology company to move out of a university and into a commercial environment. It was felt that it was important for biotechnology companies to quickly create a 'profit-making culture' within their workforces and placing entrepreneurial companies in the right environment is the key to making this happen.

Investors are now approaching the centre with a view to invest in the companies inside as they can see the benefits of facilities of this type. As the companies are constantly changing when they grow and move on to new premises, investors see incubators as an excellent source of quality deal flow. The companies themselves work among like-minded scientists and businesspeople who are in similar sectors and are coming across similar challenges. By actively networking and sharing ideas with other tenants, the lonely and arduous race to develop a successful biotechnology business is made that bit more achievable.

CONCLUSIONS

Fund raising for a start-up business is like racing in the Grand National. Your first hurdle is to get the investors interested enough by your elevator pitch for them to ask you for a full business plan. Once you have got over this jump without falling, you will need to race towards producing a convincing business plan that will lead you on to a one-to-one meeting. If you survive this hurdle and maintain the interest of the investor then you will need to make a successful leap over the final hurdle by agreeing a fair valuation and signing an investors agreement in which you both agree.

Many companies will fall at any of these hurdles but the race will not get started without sounding convincing right from the start. Prepare all your presentation materials meticulously before approaching an investor, keep a professional image that makes you look commercially viable rather simply academically interesting and finally, keep at it: it is a tough course ahead and only the very best will finish the race.

References

1. URL: www.bvca.co.uk
2. URL: www.oion.co.uk
3. URL: http://www.businesslink.org/smart/
4. URL: www.stephanemery.demon.co.uk
5. URL: www.londonbioscience.co.uk