

The challenges of starting up a biotech company in South Africa

By

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Introduction

Bioventures is South Africa's first Biotechnology Venture Capital Fund. Having begun investing in this sector in 2002, and having invested in eight start-up biotech companies, Bioventures has experienced first hand the challenges these companies face in building sustainable businesses in a tough new sector.

While this article focuses on the challenges faced in South Africa by these companies, it is also true that they also enjoy tremendous opportunities. It is important not to lose sight of these opportunities, nor of how much the companies have achieved over the last five years even as they battle to come to terms with their challenges.

Potential of the South African biotech sector

The first question that needs to be asked is this: is biotechnology a sector that South Africa can develop? The Bioventures answer to this question is: yes, it is. The groundwork has been laid and the key building blocks are in place.

Key to the development of this sector is South Africa's history of medical and life sciences based innovation, for example we have four noble prize winners in science, and the first heart transplant was undertaken here. A second key factor is our government's commitment to developing the sector. This has been the case since 2000, when the government began work on its biotechnology strategy. This strategy has been implemented and government has committed substantial resources and funding (in South African terms) to developing this sector.

A third key factor is the entrepreneurial spirit in the country. Bioventures sees excited entrepreneurs all the time and believes that the South African entrepreneurial spirit is alive and well. The fact that this spirit has not translated into many more start up companies is more to do with other blockages in the system than any lack of people willing to take risk.

A fourth factor is South Africa's well established pharmaceutical industry. One limitation of this industry though is that the South African companies tend to be largely generic

players. The big global pharmaceutical companies all have a presence in South Africa but their offices tend to focus on sales and marketing rather than R&D.

One of the most important requirements needed for the development of this sector is nevertheless absent. This is the ready availability of investment capital. We at Bioventures believe that, at the moment, this is the single biggest obstacle to realising potential of this important industrial sector.

Funding for a start up biotech company

Biotech companies traditionally go through multiple rounds of funding in order to achieve maturity. In the USA and Europe there can be as many as six rounds of venture capital funding before a company is self sustaining or lists on a stock exchange. In South Africa a few of the biotech companies have received two to three rounds of financing but are battling to raise additional rounds.

In addition, the quantum of funding received by South African biotech companies is a fraction of what their counter-parts would receive in Europe or the USA. Table 1 shows this disparity.

Table 1: Comparison of funding of start up biotech companies in the USA, Europe and South Africa.

Financing round	USA	Europe	South Africa
Seed stage*	\$ 2 million	\$1 million	\$300 000
Series A**	\$ 10 million	\$5 million	\$1.4 million
Series B	\$ 20 million	\$15 million	\$ 2.5 million
Series C	\$ 26 million	\$22 million	***

Note: * Seed stage refers to a company that is just starting out and developing a business plan.

** Series A to series C refers to further rounds of venture capital funding.

*** No South African company has managed to raise this round of finance.

Table 1 shows that South African companies have to work with substantially less capital than their counterparts in Europe and the USA. This is a problem because local companies are competing head-to-head with the US and European companies to develop new products. While it is true that South African companies can do a lot with a little, as many of our companies are currently proving, they are under-resourced, and as a result they have to give up value in their products by licensing out at a very early stage.

One of the reasons explaining the low investment level experienced here is simply the limited amount of venture capital dollars in the local market. In 2005 biotech companies raised \$3.5-b in the US and \$1.4-b in Europe. In the same year in South Africa two companies managed to raise just over \$1.2-m in total. While it is true that the US and European markets are more mature than South Africa's, and there are many more biotech

companies to finance, this disparity in funding is simply too large for the South African biotech industry to compete effectively on the world stage.

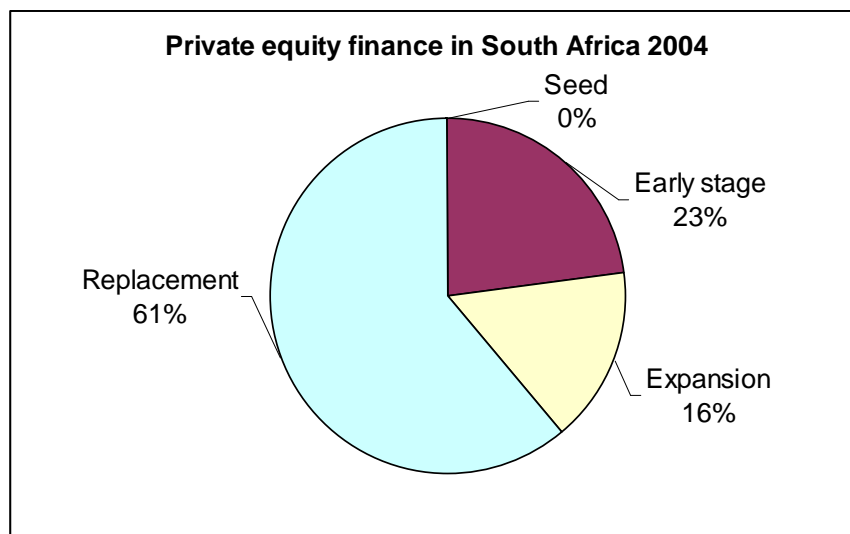
Venture Capital funding in South Africa

The limited funding of biotech companies in South Africa is not simply because the sector is out of favour; it is rather a feature of the South African private equity and venture capital market.

South Africa has a well established private equity industry that compares favourably with developed countries. In 2004 the South African private equity industry had in excess of \$7-b (R42.7-b) under management. At 2 per cent of GDP, this compares favourably with the UK and the European markets, with 2.8 per cent of GDP with 1.9 per cent of GDP respectively, but it falls behind the US market, which has 3.7 per cent of GDP in private equity funds under management.

The problem in South Africa is the lack of finance available for seed and start-up companies, the bulk of the capital going into replacement capital, such as management buy-outs and black economic empowerment transactions. Figure 2 shows the use of this private equity capital in South Africa.

Figure 1: Investment of private equity by stage in South Africa in 2004.

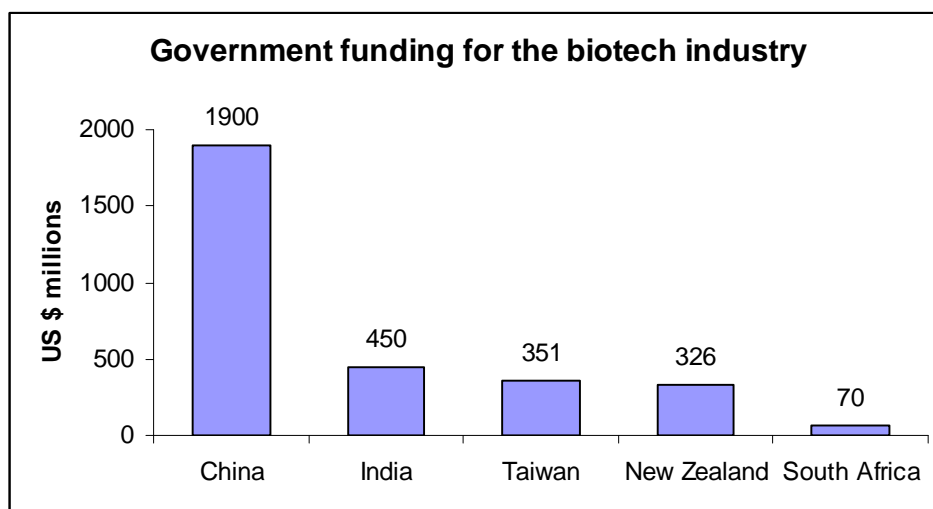


Note: Percentages are based on number of investments not value of investment. As early stage companies need a lot less money than later stage companies it is misleading to compare investment value.

Government funding for the biotech industry

In both developed and developing countries, governments have been important funders of the biotech sector. In developing countries this has been a more important source of finance than venture capital finance. However, even in comparison with other peer developing nations, South Africa is falling behind in this level of finance. Figure 3 shows government funding of the biotech sector over a period of three years in some key peer nations.

Figure 2: Government funding of the biotechnology sector over a rolling three year period, excluding funding for research in academic institutions.



It is clear from figure 2 that even smaller developing countries are contributing more to their biotech sectors than South Africa. This is compounded by the fact that the USA and European governments are also contributing significantly to their own biotech sectors. In the USA, for example, around \$3-b is available in grant finance for the biotech sector.

In South Africa there is little or no pure grant financing available. The government money available to start up biotech companies is similar in nature to venture capital and in some cases more onerous than venture capital.

Way forward

If South Africa is going to achieve its potential in the biotech sector it is absolutely critical that:

- Sufficient resources (in particular money) are committed to the sector.
- Both the state and the private sector work together to maximize the limited resources that are available.

- The limited resources available are used effectively and efficiently to achieve the maximum benefit – for example overhead costs need to be minimised and under-spending needs to be addressed.

Given the limits in the resources available in South Africa it is also important that the country focuses on a few key areas of biotech, preferably where there is already some activity or critical mass and where there is some competitive advantage.

In addition to the above two points, both the South African government and the private sector need to be realistic about the time frames and the amount of money required to develop this sector. This is not a three to a five year commitment, but a ten to a twenty year commitment at least.

Conclusion

While the challenges are large, the opportunity does exist for South Africa to develop a competitive biotech sector. In order to do this the lack of both private sector and government sector finance needs to be addressed as a matter of urgency. Biotechnology is a global industry and South African companies are woefully under-resourced when compared with their competitors.

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