
Best Practices in Biotechnology Business Development

Yali Friedman

**Logos Press, Washington, DC;
ISBN: 978 0 9734676 0 4; 2008; 186pp; \$67.95**

Journal of Commercial Biotechnology (2008) **14**, 365–367. doi:10.1057/jcb.2008.27

The future of biotechnology will unquestionably revolutionise the surface of the Earth and substantially enhance the lives of both humans and the global ecosystem. Every human being is therefore entitled to be well informed about the frontiers of biotechnology science and business development. The vital need for good literature is of great importance for anyone engaged in taking an active/inactive part of the rapidly evolving, highly technical and socially complex nature of the biotechnology industry.

During the last three decades we have observed immense growth in the biotechnology industry and the market value reached almost \$95bn by the end of 2007.¹ Hence it is estimated that the biotechnology industry comprises almost 15 per cent of the total pharmaceutical industry worldwide, with a total market value of \$643bn in 2007.¹ Biopharmaceutical product sales and product launches are increasing 15–20 per cent annually, which represent twice the rate of the overall pharmaceutical industry.¹ It is therefore a valid claim that biopharmaceuticals are the fastest-growing sector of the pharmaceutical industry, hence the importance of a much better understanding for this industry and its major impact on the future of human lives.

The mainstream of today's biotechnology companies are small- and medium-sized companies. Only 10 per cent of European

biotechnology companies have more than 50 employees, and over half employ less than 20 people. Nearly 70 per cent of Swedish biotechnology companies employ fewer than 10 people.² The fundamental origin of most biotechnology companies come from the academia in the form of spin-off companies, via Technology-Transfer Offices. Another source of biotechnology companies is science parks and business incubators, where the goal of incubators is to decrease the chance that a start-up will fail, and shorten the time and reduce the cost of establishing and growing its business.

The present work by Yali Friedman is set out to bring together a set of best practices to be used as a framework upon which to understand critical issues in biotechnology business development. Eleven chapters, covering vital aspects of valuation, licensing, cash flow, pharmacoeconomics, market selection, communication and intellectual property (IP) rights, seek to nurture the hungry minds of scientists, business developers and bioentrepreneurs alike.

The opening chapter covers the significance of the 'top five mistakes' most bioentrepreneurs stumble upon and their appropriate solutions: (1) not understanding the risks; (2) taking the wrong first step; (3) misunderstanding about the funding process; (4) failing to seek professional help; and (5) ignoring the rest of the world. Another so-called 'bonus mistake'

most biotechnology start-up companies suffer from is (6) choosing the wrong partners.

The second chapter covers the importance of communication with potential investors and the media, and hence seeks to elucidate the 'communication toolbox' that is vital for any type of communiqué between the company's management team and the rest of the world. Chapters 3 and 4 introduce the reader to the concept of IP and further elaborate on methods of securing IP and aggressive IP strategies that biotechnology companies should implement to secure and continuously build a robust IP portfolio.

The fifth chapter focuses on market-based business development and emphasises the fact that 'business development is an art'. Each and every biotechnology company should bear in mind that the market is highly dynamic and chaotic, and that good business developers call the right shots through a mixture of extensive research and 'gut feelings'. Although there are some great financial models, they most certainly require a static marketplace that does not exist and are hence not applicable to the actual 'biotech bazaar'. The benefits and impediments of in- and out-licensing technology are comprehensively covered in Chapter 6. The author focuses on what he calls the 'Six W's', similar to the four 'P's' of marketing, which are: Who Wants What, Why, When and Wow (how much?). In addition, the chapter extensively describes the basic principles, the vocabulary, the process and the people behind a licensing deal. This chapter is thus essential to anyone involved in either out- or in-licensing biotechnology.

The concept of Free Cash Flow (FCF) as an essential ingredient for growing a biotechnology business is explicitly described in Chapter 7. FCF represents key statistics that investors consider when deciding to invest and companies including FCF in their statement signal positive financial performance to stakeholders and investors alike. In Chapter 8 the reader is introduced to the main mechanisms that facilitate access to

innovation in biotechnology; Clearing Houses and Patent Pools. Each model poses strengths, although they also suffer from weaknesses, it is highly dubious that any of the models will provide an unambiguous perfect solution. The author concludes the chapter by explaining that it is more likely that the biotechnology industry will benefit by adapting different models for a sustainable business progress development.

One of the most impressive and appealing chapters in this book is Chapter 9, which introduces the reader to the vitality of contemporary Health Economics and Pharmacoeconomics and their strategic impact in biotechnology companies. The chapter covers the commercial importance of incorporating health economics into broader business strategies in a systematic fashion to meet the needs of a rapidly changing external customer milieu. The author further discusses different types of economical analysis for new products such as cost-benefit analysis, cost-effectiveness analysis, cost-minimisation analysis and budget-impact analysis. The major rationale of pharmacoeconomics is to adapt a customer-focused business strategy.

Chapter 10 broadly describes the benefits of service-based biotechnology companies. There are several ways to utilise key technologies for biotechnology companies: (1) to apply technologies in internal, proprietary research, with the goal of developing new drugs, (2) to commercialise the technology and work with other companies, (3) to offer service, based on a company's technology, and derive service charges. The author illustrates how and why commercialising services can be a viable and interesting option to start a biotechnology company in balancing risks and building solid bases for a future business development. The author shows how to succeed with such a strategy and how to avoid the traps inherent in the service-based business model.

The final chapter details essential biotechnology market values and statistics. In addition, the author seeks to define the significant difference between

biopharmaceuticals and pharmaceuticals, and finds that this division affects estimates of total industry size/revenue and detracts from an understanding and analysis of the industry.

Best Practices in Biotechnology Business Development is essential for every biotechnology enthusiast who seeks a comprehensive yet compact literature. Yali Friedman's previous work *Building Biotechnology* is one of the most important books within the biotechnology-business area and is today used by a vast number of international universities where the fundamental science of bioentrepreneurship is taught. This new book reviewed here

represents a lucid knowledge platform that enables professionals, students and the general public to access the essentials of biotechnology business development with ease.

Hans-Erik Hamid Lydecker

Head of *BIOTECH* and *inBIOvation*, Stockholm, Sweden

E-mail: erik.lydecker@gmail.com

References

1. 'IMS Health Reports Global Pharmaceutical Market Grew 7.0 per cent in 2006, to \$643bn', IMS Health press release, 20th March, 2007.
2. Alper, J. (2002). The rise of the European bioentrepreneur. *Nat. Biotechnol.* **20**, BE3.