Friedman, Yali – Pocket Biotech Industry Primer

Logos Press, 2008, [Business] Grade ★★★★

If you quickly need to gain a basic understanding of the biotech industry this is a very good place to start. Yali Friedman is the publisher of the Journal of Commercial Biotechnology, the head of data analytics at Scientific American and the founder of the site DrugPatentWatch.com. He should know what he is talking about.

To set the reader's expectations right the book doesn't aim to give deeper insights into investing in biotech stocks or to provide a multitude of detailed numbers on the market and its many segments from an economic perspective. The book aims to give a basic understanding of the basic functions of the biotech sector and in my view does a good job. Still, if you understand the sector it is then obviously a lot easier to invest successfully.

The author quite broadly defines biotech as "the application of molecular biology for useful purposes" and then on top of medical functions includes applications for farming, environmental remediation and industrial processes. Most of us still relate biotech to the development of drugs. Biotech pharmaceuticals are produced by living organisms like bacteria, yeast cells or animal cells and are often made up of longer molecular chains compared to the small molecule, chemically produced products of the traditional pharma industry. Then to be honest the two industries are gradually converging.

How can we then enlist living organisms like bacteria to produce the products we desire? To answer Friedman takes a step back and describes the foundations of molecular biology, i.e. how the information in our genes produces proteins with different structural and functional characteristics. By manipulating this process and combining DNA from various sources we can get the organisms to work for us and create targeted compounds in a process very different from the industrialized trial-and-error process of traditional pharma companies.

After an introduction the book starts with a historical representation of the birth and upbringing of the still relatively young biotech industry. It gives a good understanding of the historical reasons for the sometimes slightly odd features of the sector. The author's long experience with the biotech industry shines through. The above-mentioned following description of molecular biology is short and basic but equally excellent. The author follows up with a strong chapter on the long and tedious drug development process that so dominates the day-to-day activities of biotech companies.

Then the book runs out of steam in the last two chapters. The chapter on tools and techniques gives a helter-skelter description of various industry related topics. Many of them are important but there is no storyline to keep the reader interested. In the final chapter on the applications of biotechnology more than half of the text is devoted to industrial and agricultural uses. While this gives a good broad overview it probably isn't what the reader would expect.

Still, it's hard to complain. The *Pocket Biotech Industry Primer* packs a lot of knowledge into a short format. The 83 well written pages are quite possible to read in one sitting. Fairly complicated issues are explained in a simple – but not too simple – manner and with no over-usage of industry jargon.

Granted, this is only a first glimpse into the exciting biotech industry. For the investor who complements with insights into the economics and market conditions for various therapy areas plus an understanding of biotech companies' business models this book is still a useful tool.

Mats Larsson, October 28, 2017