

The Antidote

Twenty years ago, on my way home from a Gordon Conference, I bought the book *The Billion Dollar Molecule*, by Barry Werth, in a Boston bookstore. By the time the plane landed in Frankfurt, I had more or less finished reading the fascinating narrative, almost like a crime novel, of the founding of Vertex and the first four years of the business. The start-up company was formed by a group of former employees of Merck, Sharp, and Dohme, to develop novel drugs based on structure-guided design. I had been alerted to the book by Manuel Navia, a Vertex scientist, who told me that Barry Werth had been an embedded journalist at Vertex. Werth had lived among the founders of the business and was present when successes, crises, hope, and dismay changed in rapid succession. Navia was aghast to learn that the book contained quotations from him that he would not want his mother to know.

I gave the book to my neighbors—a surgeon, an internist, and a judge—and they immediately got infected and caught by the tension of life in a small biotech company, destined either to be rapidly successful or to vanish. A few weeks later I suggested to Peter Gölitz to have the book translated into German, which he did initiate.

Now Barry Werth has published *The Antidote*, which sketches the history of Vertex since 1994 and its ultimate success. Again using the format of embedded journalism, *The Antidote* describes the different phases that Vertex went through, as it developed from a small biotech company to a mid-sized partner of large pharmaceutical companies, for whom it mostly carried out projects, and finally to the achievement of first having two of its own drugs approved by the FDA. It describes the evolution of the scientific processes in the company, which later had to embrace high-throughput screening and phenotype approaches, i.e., the opposite of structure-based design. The Antidote paints the picture of managerial and organizational development, in the course of its transformation from a small garage firm into a larger business operation, and finally into an organization with several research sites and a headquarters in two glittering glass towers on the Boston harbor quay.

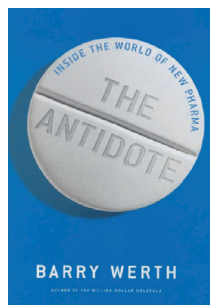
It also tells about the fate of the founders, the “torchbearers”, who upheld the “Vertex values” until they left for various reasons, were disempowered (as happened to Josh Boger, the charismatic and visionary founder), or were simply kicked out brutally at extremely short notice (as happened to Mark Murcko, the major scientific brain of the company, who afterwards decided to be a true Vertex soldier and “not to be an asshole”).

Probably such transitions are frequent—if not to say normal—during the maturation of small companies with high ambitions and full of motivation and inspiration to become larger, strictly business-orientated, companies. The events leading to comments by Vertex employees such as “There is no more Vertex” or “Vertex is dead, they should call it something else” are sad, but also very hard to avoid.

Reflecting the development of the Vertex organization, the book focuses on the business side and on the need to integrate new functions beyond research, leading ultimately to a sales force. It describes how it was necessary to react positively to the coverage of Vertex by Wall Street analysts, and to repeatedly re-finance the growing company by raising hundreds of millions of dollars in “death marches” by the company leaders. In contrast to *The Billion Dollar Molecule*, the book only touches occasionally on the process of finding new drugs, and because of this shift in focus the story is less captivating for dyed-in-the-wool scientists (but perhaps not for entrepreneurs). To illustrate the story, Werth makes frequent use of lengthy quotations from interviews with the various people concerned. Personally, I found these distracting, despite their authenticity. I would have preferred to read a straightforward account of the events rather than a collection of opinions and comments. In the second half of the book, the writing came closer to my taste.

The Antidote is a good book, enjoyable to read, in particular for those who are interested in getting a glimpse of the process of development that follows drug discovery, and of the business and managerial aspects of growing a small start-up to become a fully-fledged cash-rich pharmaceutical company. However, I find *The Billion Dollar Molecule* better, more intense and personal—maybe because I regard myself as being closer to the scientists at the bench than to the managers in their offices.

Following these comments, I will give *The Antidote* to my neighbors, and also to my children who have just finished or are about to finish their university education. But I will not suggest to Peter Gölitz that he should arrange for it to be translated into German. Vertex is certainly a success, its development deserves much admiration and recognition, and taken together the two books paint a fascinating and enjoyable picture of its history (and are also a valuable advertisement for the company). However, to gain a more multi-faceted picture, and one that would more truly reflect the processes of drug discovery and development, the reader would also need to have benefited from views from the outside. Thus, I wonder how contemporaries of the Vertex founders at Merck, Sharpe, and Dohme viewed, and in retrospect now view, Vertex and its



The Antidote
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projects. Is it radically different from Merck, or did Vertex become like Merck? What was the view at Novartis—and what did that company get out of the very large kinase deal with Vertex at a time when Novartis had put the first kinase inhibitor, Gleevec, onto the market and was the global leader in this field? Jürg Zimmermann, the inventor of Gleevec, who now has a senior position in Novartis, would certainly have a clear opinion. How does Bernd Riedl, the inventor of Bayer's Nexavar, which was discovered on the basis of combinatorial chemistry, view the case? Or how is it seen by prominent drug researchers in different companies? Or, in wider terms, are the investments in biotech companies, as compared to Big Pharma, justified, or even required, considering that Vertex, over time, spent 4 billion dollars to arrive at its first

own drug, compared with the estimated 1 billion dollars for Big Pharma? Is it true—as was once the view within Vertex—that biotech research drives the Ferraris and Big Pharma the Volkswagens? Or even if it were true, which company is more valuable, Volkswagen or Ferrari? Has Vertex become the first of the “New Pharma” companies, as was the ambitious goal, or does it now follow the established industry model?

Barry Werth has entitled his new book *The Antidote*. I wonder what the “Dote” is?

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