The Story of Taxol. Nature and Politics in the Pursuit of an Anti-Cancer Drug. By J. Goodman and V. Walsh (University of Manchester, UK). Cambridge University Press, Cambridge, UK. 2001. xii + 282 pp. 15 × 22.5 cm. $27.95. ISBN 0-521-56123-X.

Chemicals, as products of what Djerassi once defined as "the most insular of the hard sciences", have rarely inspired books. However, in the realm of natural products, this has happened twice in the past decade. After Werth's *The Billion Dollar Molecule*, a book centered on the fungal immunosuppressant FK506, also the saga of paclitaxel has now found its bards. However, the two books could not be more different, since *The Story of Taxol* is focused more on politics than on science, and the reader will look in vain for the personality and the motivations of the major players in the field or for their personal accounts of the facts. Rather than the excitement of bringing a natural product from the bench to the bedside, the book is more interested with the ecological and political implications posed by the commercialization of a natural product as a drug. As such, it should be a compulsory reading for everyone involved in natural products and their pharmaceutical exploitation.

The chequered history of Taxol is well known to most readers of the *Journal of Natural Products*, where it was summarized in a review article in 1993 (*56*, 1657−1668) and does not need recapping here. The first part of the book puts the discovery of paclitaxel into a historical perspective, linking the NCI-USDA plant screening program of the 1960s to the search for plant sources of cortisone during the previous decade. I was happy to find a discussion of the actual number of plant species screened in the program, realistically put between 10 000 and 13 000, far less than the figure of 35 000 so often reported also in the primary scientific literature. The second part is centered on the difficulties encountered by paclitaxel to proceed from a chemical curiosity into a drug lead, while the third part focuses on the controversial deal between NCI and Bristol-Myers Squibb (BMS), which eventually turned paclitaxel into a drug, and on the ecological aspects of the exploitation of the Pacific yew as a source of this drug. The book ends somewhat abruptly, as if a sequel should follow. Given the economic success of Taxol, and the legal controversies still surrounding it, there will not be any shortage of facts to report.

The authors have done an enormous work of documentation, and the reader is sometimes overwhelmed by the amount of data and facts presented. These are taken not only from the published literature, but also from unpublished primary material (letters, reports, memos) and oral testimonies. What the book too often portrays is a tale of government inefficiency and corporate machinations, and I believe that, in this context, the book is sometimes biased. Screening for anticancer activity was much less sophisticated during in the 1970s than it is now, and the NCI commitment to P388 is too easy to criticize by today's standards. Since nothing was basically known on the ecology of the Pacific yew in those years, it would also have been difficult to make long-term commitments to alternative ways to produce paclitaxel. As to the NCI−BMS deal, in the late 1980s paclitaxel was still perceived as a "difficult drug", while the only cancer for which it had been proved effective (ovarian cancer) was, in legal terms, a rare disease, affecting less than 20 000 cases per year. So, betting on the compound involved risk. Furthermore, it should also be reminded that Taxol is not the only blockbuster drug developed with the support of NIH and that even this Institute opposes the idea of trying to recoup profits from drugs it helped to discover, perceiving it as a threat to innovation and a discouragement to invention (www.nih.gov/news/070101wyden.htm). Given the current consumption of Taxol, I see no way of exploiting the Pacific yew as a renewable source of paclitaxel. Blaming BMS for cutting the tie between *Taxus brevifolia* and Taxol and causing it to "lose its American identity" is meaningless in scientific terms.

The book fails to give due credit to three people who greatly contributed to the Taxol story. The first one is Mansukh Wani, who co-discovered the compound, the second one is the late Matt Suffness, who directed the NCI program on anticancer natural products for most of the time covered by the book, and the third one is Pierre Potier, whose first and seminal semisynthesis of paclitaxel paved the way to the development of this compound into a drug. Wani is not even mentioned in the book, while the contributions by Suffness and Potier, though mentioned, would surely have deserved better highlighting. While discussing the name controversy, the book does not mention that Taxol was the registered name of a speciality against constipation produced by Continental Laboratories and based on pancreatic enzymes, bile acids, and aloe. This Taxol is still mentioned in the1967s twenty-fifth edition of Martindale's (page 499), and the problem is therefore not how BMS could *steal* the name Taxol from the chemical community, but how it could *recycle* it from the gastrointestinal to the oncological realm. Finally, the book could have benefited from chemical polishing. There are only two chemical formulas, both awkwardly drawn, and both missing one methyl from the taxane skeleton.

In conclusion, this book is an informative account of a controversial story that has surprisingly remained too long untold. It gives a perspective on the way a natural product can proceed from the lab to the clinic, but nothing of the excitement and tension that characterized the multidisciplinary research on Taxol during the 1980s and 1990s will be found in it.

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