

# A History of Molecular Biology

*Michel Morange*

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**Michel Morange : A History of Molecular Biology** before purchasing it in order to gauge whether or not it would be worth my time, and all praised A History of Molecular Biology:

3 of 3 people found the following review helpful. Cloning didn't happen by accident By Steve G If you are interested in subjects like cloning and genetic engineering, then you should read Michel Morange's "The history of molecular biology". The developments just mentioned did not happen overnight. They are the product of decades of work and the book starts with the earliest experiments in molecular biology, the child of biochemistry and genetics. To make the book easier to understand, because some of the concepts are difficult, the book is organized by theme. In each theme progress is discussed in chronological order. Unlike how biology is taught, as a series of smooth steps, there actually was competition between various viewpoints and Morange outlines these. The major weakness of the book was that there was little biographic material on the scientists, although if molecular biology is like other sciences, then some of the characters must have been quirky. The book was written in French and translated by Matthew Cobb, but the translation was uneven and some of the sentence structure did not translate well into English. This was surprising since Cobb has shown himself to be an excellent writer as demonstrated in "The egg and sperm race". Overall the book was very interesting but the novice to molecular biology might have to do some extra research. 2 of 12 people found the following review helpful. OK By K Very French oriented ie. Jacob/Monod vs Brenner. However, defined a problem I have answered on the relationship between population "genes" and molecular biology "genes". He missed my Theory of Genotypic Selection and my deconvolution of all the levels of replication and selectionist versus non-selectionist

theories. However, I will use this book in my course. It's a start. I may even force the students to buy it in French as not all molecular biology knowledge is in English. He also missed my demonstrating to Sanger that acrylamide gels can resolve by one nucleotide. This level of resolution was first demonstrated by B.J. Davis in Len Ornstein's lab at Mt. Sinai. BJ has recently passed away.

Every day it seems the media focus on yet another new development in biology--gene therapy, the human genome project, the creation of new varieties of animals and plants through genetic engineering. These possibilities have all emanated from molecular biology. A History of Molecular Biology is a complete but compact account for a general readership of the history of this revolution. Michel Morange, himself a molecular biologist, takes us from the turn-of-the-century convergence of molecular biology's two progenitors, genetics and biochemistry, to the perfection of gene splicing and cloning techniques in the 1980s. Drawing on the important work of American, English, and French historians of science, Morange describes the major discoveries--the double helix, messenger RNA, oncogenes, DNA polymerase--but also explains how and why these breakthroughs took place. The book is enlivened by mini-biographies of the founders of molecular biology: Delbrück, Watson and Crick, Monod and Jacob, Nirenberg. This ambitious history covers the story of the transformation of biology over the last one hundred years; the transformation of disciplines: biochemistry, genetics, embryology, and evolutionary biology; and, finally, the emergence of the biotechnology industry. An important contribution to the history of science, A History of Molecular Biology will also be valued by general readers for its clear explanations of the theory and practice of molecular biology today. Molecular biologists themselves will find Morange's historical perspective critical to an understanding of what is at stake in current biological research.

From Library Journal Molecular biology is responsible for the recent high-profile developments in cloning, genetic engineering, DNA fingerprinting, etc. Morange, a French molecular biologist, covers the birth of the field at the beginning of this century, the discovery of DNA and the deciphering of the genetic code, and the practical applications resulting from the revelations of the last 50 years. Copyright 1999 Reed Business Information, Inc. [A History of Molecular Biology is] well-researched and clearly written...Morange is critical of the triumphalist and reductionist claims of molecular biology, and ends the book by reflecting on its place in the life sciences. Writing from Paris, he is able to stand back from the orthodox story with its focus on "les Anglo-Saxons", giving credit to others such as Nobel prizewinners Andr Lwoff, Jacques Monod and Francois Jacob. --Steven Rose (New Scientist) On the eve of a long weekend, I happened to see this book on the lab bench of one of my colleagues and became interested in it from the first glance. I took it home and read it almost nonstop in three days. A History of Molecular Biology is the captivating tale of the origins of one of the most influential modern scientific disciplines and the story of its amazing progress...The great advantage of this work is that it does not simply follow the chronological order of events. On the contrary, the book is written in such a way that each chapter could be read virtually independently of others (which I essentially did myself, starting with the topics most interesting to me)...Importantly, the book is written not by a writer who is external to the subject he describes, but by a person who is directly involved in molecular biology and biochemical studies and is thus familiar with the pertinent techniques and scientific publications...That this is a very good translation from the French should also be noted as an advantage of this book. Being a compact but essentially complete historical account, A History of Molecular Biology will prove interesting reading not only to the general public (one of the author's major aims), but to specialists as well. --Vadim V. Demidov (Modern Drug Discovery 2001-03-01) The book is fascinating and compelling. Moreover, the style of the writing gives no hint that the English version is a translation. The book is clearly written by someone intimately acquainted with the science of molecular biology and the personalities involved...Morange concludes his Introduction with the words "Whatever the value of the interpretations put forward here, this book and the historical information it contains will enable others to take us further in the understanding of the molecular revolution in biology". I wholeheartedly agree: the book is indeed a work of scholarship, which, in addition to outlining the history of an exciting period in the development of biology, includes much thought provoking comment. --K. Manchester (Endeavor) Michel Morange is a biochemist who has written a history of molecular biology that also includes a history of genetic engineering, taking up the story more or less where Judson[']s The Eighth Day of Creation] leaves off. He also wants to place more emphasis on the role of biochemistry, and to give the French school (as he calls it) a greater role in the history of the subject than has been ascribed to it by British and US writers. He throws interesting light on why the subject developed so slowly in France...Morange also wishes to press on historians of molecular biology the importance of the distinction made by Francois Jacob and Monod between structural and regulatory genes...The book culminates with an account of the life and work of Arthur Kornberg, whose work on DNA polymerase is much admired by the author. The book has a certain charm to it, and it is interesting to have another Rashomonic view of the history where Watson and Crick do not occupy all of the stage and where the names of Luria, Delbrück and other members of the phage school do not even appear in the index. --Sydney Brenner (Nature) At last--here is a history of molecular biology that brings us up to the decade in which we now live! Translated by Matthew Cobb from the French edition of 1994, the text reads well, and readers with a basic

scientific knowledge should have no problems. The author is to be congratulated for having designed and brought to market such a readable and informative account...No book exists to date that can match Morange's for the breadth and recency of the treatment of his subject. By offering summary accounts of topics and then directing the reader to sources that explore them more fully, he is making the recent history of the subject accessible to a wide audience. The honors students with whom I used this book in teaching were unanimous in their praise. It should prove an excellent course book for students with a basic knowledge of biological science. --Robert Olby (Trends in Genetics)Morange traces the origin and growth of molecular biology and allied disciplines. He does not weave a story in chronological order; rather, he details the roots of each discipline that contributed to the modern molecular biology paradigm. Included are fundamental ideas such as the one gene-one enzyme model, the chemical nature of gene function, and the deciphering of the genetic code...The book also provides background about the commercialization of molecular biology knowledge. Each chapter is supported by ample references to original research papers and respected secondary sources...Recommended. --B. R. Shmaefsky (Choice)A History of Molecular Biology provides an approachable introduction to the subject of molecular biology and should appeal to lay readers interested in science. --Lucy Treagan (Science Books Films)Now, however, we have available in English a balanced, scholarly, and manageable survey of the history of molecular biology by Michel Morange, an author well-qualified to provide such a general historyHis well-balanced account gives a very readable survey of this complex history, which should be useful to scientists, historians, and especially the general reader, as a point from which to view this important field of current science. --William C. Summers (Journal of the History of Medicine and Allied Sciences)Language NotesText: English (translation) Original Language: French