



Electron micrograph of avian sarcoma-leukosis virus DNA synthesized in the endogenous reaction. Purified Rous-associated-virus-2 virions "were permeabilized with melittin to activate endogenous DNA synthesis. Branches are apparent at several points along the length of the molecule." [From Boone and Skalka's chapter in *Reverse Transcriptase*]

plain the evolution of DNA genomes from an RNA world. Certainly the enzyme has proved to be an essential tool for academic scientist and biotechnologist alike in providing the means to manufacture complementary DNA libraries from messenger RNA. In recent years retroviruses have taken on new dimensions in human disease, both as causative pathogens (human T cell leukemia viruses and human immunodeficiency viruses) and as vectors for gene therapy. The elucidation of the crystalline structure of HIV reverse transcriptase may aid the rational design of new enzyme inhibitors and helps to explain the resistance to azidothymidine and other DNA chain terminators that emerge in patients under drug treatment.

My only criticism of the book is that some of the figures could be more clearly presented. It seems invidious to pick out individual chapters, as all of them are illuminating, yet I particularly enjoyed Telesnitsky and Goff on strand transfer during reverse transcription and Hu, Pathak, and Temin on the role of reverse transcriptase in retroviral recombination because they explain complex processes so lucidly. The volume ends by reprinting the "Retrotrivia crossword" devised by John Coffin and Naomi Rosenberg for the 20th anniversary of the discovery of reverse transcriptase.

This volume is a treasure, to be recommended to those with but a casual interest in the subject as well as to specialists in the field. Sadly, it unintentionally serves as a memorial to the late Howard M. Temin, who contributed to it and lived just long enough to see it in print.

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