

Cover image: Pictured is an illustration of the reverse transcriptase (RT) of the HIV-1 virus moving along template RNA, as visualized by fluorescence resonance energy transfer. The original discovery of RT in RNA tumor virions overturned the central dogma of molecular biology, revealing that DNA can be transcribed from an RNA template. It is now known that approximately half of the human genome is generated by RTs, either in the form of telomerases, which synthesize the ends of chromosomes, or retrotransposon RTs, which distribute copies of themselves throughout the genome. The Sackler Colloquium on Reverse Transcriptases That Shaped Genomes examined structures, functions, and evolutionary relationships of RTs that may influence development, aging, and disease. See the introduction to the Sackler Special Feature by Marlene Belfort et al. on pages 20304–20310. Image courtesy of Xiaowei Zhuang (Harvard University).

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