

# A GENETIC SWITCH

Phage Lambda Revisited

The first edition of *A Genetic Switch* has become a classic exposition of gene regulation, explaining in simple molecular terms how proteins bind DNA and turn genes on and off as the virus lambda grows in bacteria. To that original text, reprinted here with small modifications, the author has added a chapter describing recent advances that extend and deepen our understanding of lambda's "*genetic switch*." The study of lambda reveals the basic reactions that underlie transcriptional regulation in all organisms and shows how those reactions can be combined to produce a complex regulatory circuit.

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## *From the reviews of the first edition*

The work is a paradigm for the mechanisms of regulation.... A clear exposition of a series of triumphant experiments and insights that have brought us close to the molecular heart of the matter of genetic regulation.

— Sydney Brenner, *Nature*

Succeeds in giving a complete and current account of the molecular interactions that govern the on and off states of the best known regulator of gene expression. Without omitting details, the book makes the sophisticated molecules seem simple and accessible to all.... Serves as a springboard for the next generation.

— Naomi Franklin, *The Scientist*

A marvelous new book.... Ptashne provides a lucid and very logical progression through this maze of gene regulation.... An excellent method to teach science.

— Anne Delle, *New Scientist*