
List of Contents

Part I. Introduction

The Almost-Forgotten Fifth Nucleotide in DNA: An Introduction	3
<i>W. Doerfler</i>	

Part II. Pattern Formation

Replication and Translation of Epigenetic Information	21
<i>A. Brero, H. Leonhardt, and M. C. Cardoso</i>	
DNA Methyltransferases: Facts, Clues, Mysteries	45
<i>C. Brenner and F. Fuks</i>	
DNA Methylation in Plants	67
<i>B. F. Vanyushin</i>	

Part III. Determinant of Promoter Activity

De Novo Methylation, Long-Term Promoter Silencing, Methylation Patterns in the Human Genome, and Consequences of Foreign DNA Insertion	125
<i>W. Doerfler</i>	

Part IV. DNA Methyltransferases

Establishment and Maintenance of DNA Methylation Patterns in Mammals	179
<i>T. Chen and E. Li</i>	
Molecular Enzymology of Mammalian DNA Methyltransferases	203
<i>A. Jeltsch</i>	

Part V. Epigenetic Phenomena

Familial Hydatidiform Molar Pregnancy: The Germline Imprinting Defect Hypothesis?	229
<i>O. El-Maarri and R. Slim</i>	

Dual Inheritance	243
<i>R. Holliday</i>	

Part VI. Mutagenesis and Repair

Mutagenesis at Methylated CpG Sequences	259
<i>G. P. Pfeifer</i>	

Cytosine Methylation and DNA Repair	283
<i>C. P. Walsh and G. L. Xu</i>	

Subject Index	317
-------------------------	-----

<http://www.springer.com/978-3-540-29114-5>

DNA Methylation: Basic Mechanisms

Doerfler, W.; Böhm, P. (Eds.)

2006, VIII, 324 p. 24 illus., 6 illus. in color., Hardcover

ISBN: 978-3-540-29114-5