
Contents

<i>Preface</i>	<i>v</i>
<i>Contributors</i>	<i>ix</i>
1 Advances in Epigenetic Technology <i>Trygve O. Tollefsbol</i>	1
2 DNA Methylation Detection: Bisulfite Genomic Sequencing Analysis <i>Yuanyuan Li and Trygve O. Tollefsbol</i>	11
3 Methylation-Specific PCR. <i>Ja-Lok Ku, You-Kyung Jeon, and Jae-Gabb Park</i>	23
4 Analysing DNA Methylation Using Bisulphite Pyrosequencing <i>Thomas Mikeska, Jörg Felsberg, Chelsea A. Hewitt, and Alexander Dobrovic</i>	33
5 Closed-Tube PCR Methods for Locus-Specific DNA Methylation Analysis <i>Ida L.M. Candiloro, Thomas Mikeska, and Alexander Dobrovic</i>	55
6 A Combined Bisulfite Restriction Analysis Bioinformatics Tool: Methyl-Typing <i>Cheng-Hong Yang, Yu-Huei Cheng, Li-Yeh Chuang, and Hsueh-Wei Chang</i>	73
7 SIRPH: An HPLC-Based SNUPE for Quantitative Methylation Measurement at Specific CpG Sites <i>Heike Singer, Nicole Nüsgen, and Osman El-Maarri</i>	89
8 Restriction Landmark Genome Scanning <i>Hisato Okuizumi, Tomoko Takamiya, Yasushi Okazaki, and Yoshihide Hayashizaki</i>	101
9 Methylated DNA Immunoprecipitation Genome-Wide Analysis <i>Mattia Pelizzola and Annette Molinaro</i>	113
10 Methylated-CpG Island Recovery Assay. <i>Natalie Mitchell, J. Tyson DeAngelis, and Trygve O. Tollefsbol</i>	125
11 Global DNA Methylation Analysis Using the Luminometric Methylation Assay. <i>Mohsen Karimi, Karin Luttrupp, and Tomas J. Ekström</i>	135
12 Inhibition of DNA Methylation in Somatic Cells. <i>Angelica M. Giraldo and Kenneth R. Bondioli</i>	145
13 DNA Methyltransferase Assays <i>Renata Z. Jurkowska, Alexandre Ceccaldi, Yingying Zhang, Paola B. Arimondo, and Albert Jeltsch</i>	157
14 A Chromatin Immunoprecipitation Protocol for Small Cell Numbers <i>Philippe Collas</i>	179
15 Native Chromatin Immunoprecipitation <i>Céline Cossean and Christoph Grunau</i>	195

16	Q-PCR in Combination with ChIP Assays to Detect Changes in Chromatin Acetylation	213
	<i>Ryan A. Irvine, Cindy Okitsu, and Chih-Lin Hsieh</i>	
17	Sequential Chromatin Immunoprecipitation Assay and Analysis.	225
	<i>Ricardo B. de Medeiros</i>	
18	Combined Chromatin Immunoprecipitation and Bisulfite Methylation Sequencing Analysis	239
	<i>Yuanyuan Li and Trygve O. Tollefsbol</i>	
19	Studying RNA–Protein Interactions In Vivo By RNA Immunoprecipitation	253
	<i>Luke A. Selth, Pierre Close, and Jesper Q. Svejstrup</i>	
20	Using ChIP-Seq Technology to Generate High-Resolution Profiles of Histone Modifications.	265
	<i>Henriette O’Geen, Loriguil Echipare, and Peggy J. Farnham</i>	
21	Mapping Open Chromatin with Formaldehyde-Assisted Isolation of Regulatory Elements.	287
	<i>Takao Nammo, Santiago A. Rodríguez-Seguí, and Jorge Ferrer</i>	
22	Inhibition of Histone Deacetylases.	297
	<i>Yi Huang, Patrick G. Shaw, and Nancy E. Davidson</i>	
23	Computational Methods for Epigenetic Analysis: The Protocol of Computational Analysis for Modified Methylation-Specific Digital Karyotyping Based on Massively Parallel Sequencing.	313
	<i>Jian Li, Qian Zhao, and Lars Bolund</i>	
	<i>Index</i>	329