
Contents

<i>Preface</i>	<i>v</i>
<i>Contributors</i>	<i>ix</i>
1. Introduction to Microarray Technology	1
<i>Martin Dufva</i>	
2. Probe Design for Expression Arrays Using OligoWiz	23
<i>Rasmus Wernersson</i>	
3. Comparative Genomic Hybridization: Microarray Design and Data Interpretation	37
<i>Richard Redon and Nigel P. Carter</i>	
4. Design of Tag SNP Whole Genome Genotyping Arrays	51
<i>Daniel A. Peiffer and Kevin L. Gunderson</i>	
5. Fabrication of DNA Microarray	63
<i>Martin Dufva</i>	
6. Immobilization Chemistries	81
<i>Sascha Todt and Dietmar H. Blohm</i>	
7. Fabrication Using Contact Spotter	101
<i>Annelie Waldén and Peter Nilsson</i>	
8. RNA Preparation and Characterization for Gene Expression Studies	115
<i>Michael Stangegaard</i>	
9. Gene Expression Analysis Using Agilent DNA Microarrays	133
<i>Michael Stangegaard</i>	
10. Target Preparation for Genotyping Specific Genes or Gene Segments	147
<i>Jesper Petersen, Lena Poulsen, and Martin Dufva</i>	
11. Genotyping of Mutations in the Beta-Globin Gene Using Allele Specific Hybridization	157
<i>Lena Poulsen, Jesper Petersen, and Martin Dufva</i>	
12. Microarray Temperature Optimization Using Hybridization Kinetics	171
<i>Steve Blair, Layne Williams, Justin Bishop, and Alexander Chagovetz</i>	
13. Whole-Genome Genotyping on Bead Arrays	197
<i>Kevin L. Gunderson</i>	
14. Genotyping Single Nucleotide Polymorphisms by Multiplex Minisequencing Using Tag-Arrays	215
<i>Lili Milani and Ann-Christine Syvänen</i>	
15. Resequencing Arrays for Diagnostics of Respiratory Pathogens	231
<i>Baochuan Lin and Anthony P. Malanoski</i>	
16. Comparative Genomic Hybridization: DNA Preparation for Microarray Fabrication	259
<i>Richard Redon, Diane Rigler, and Nigel P. Carter</i>	

17. Comparative Genomic Hybridization: DNA Labeling, Hybridization and Detection	267
<i>Richard Redon, Tomas Fitzgerald, and Nigel P. Carter</i>	
18. Chromatin Immunoprecipitation Using Microarrays	279
<i>Mickaël Durand-Dubief and Karl Ekwall</i>	
<i>Index</i>	297