

# Contents

<b>Chapter 1</b>	
Microarray Platforms .....	1
<i>Patrick M. Gaffney and Kathy L. Moser</i>	
<b>Chapter 2</b>	
Normalization of Microarray Data .....	9
<i>Rudolph S. Parrish and Robert R. Delongchamp</i>	
<b>Chapter 3</b>	
Microarray Quality Control and Assessment .....	29
<i>David Finkelstein, Michael Janis, Alan Williams, Kathryn Steiger, and Jacques Retief</i>	
<b>Chapter 4</b>	
Epistemological Foundations of Statistical Methods for High-Dimensional Biology .....	57
<i>Stanislav O. Zakharkin, Tapan Mehta, Murat Tanik, and David B. Allison</i>	
<b>Chapter 5</b>	
The Role of Sample Size on Measures of Uncertainty and Power .....	77
<i>Gary L. Gadbury, Qinfang Xiang, Jode W. Edwards, Grier P. Page, and David B. Allison</i>	
<b>Chapter 6</b>	
Pooling Biological Samples in Microarray Experiments .....	95
<i>Christina M. Kendziora</i>	
<b>Chapter 7</b>	
Designing Microarrays for the Analysis of Gene Expressions .....	111
<i>Jane Y. Chang and Jason C. Hsu</i>	
<b>Chapter 8</b>	
Overview of Standard Clustering Approaches for Gene Microarray Data Analysis .....	131
<i>Elizabeth Garret-Mayer</i>	
<b>Chapter 9</b>	
Cluster Stability .....	159
<i>Bernard S. Gorman and Kui Zhang</i>	

<b>Chapter 10</b>	
Dimensionality Reduction and Discrimination .....	177
<i>Jeanne Kowalski and Zhen Zhang</i>	
<b>Chapter 11</b>	
Modeling Affymetrix Data at the Probe Level .....	197
<i>Tzu-Ming Chu, Shibing Deng, and Russell D. Wolfinger</i>	
<b>Chapter 12</b>	
Parametric Linear Models .....	223
<i>Christopher S. Coffey and Stacey S. Cofield</i>	
<b>Chapter 13</b>	
The Use of Nonparametric Procedures in the Statistical Analysis of Microarray Data .....	245
<i>T. Mark Beasley, Jacob P.L. Brand, and Jeffrey D. Long</i>	
<b>Chapter 14</b>	
Bayesian Analysis of Microarray Data .....	267
<i>Jode W. Edwards and Pulak Ghosh</i>	
<b>Chapter 15</b>	
False Discovery Rate and Multiple Comparison Procedures .....	289
<i>Chiara Sabatti</i>	
<b>Chapter 16</b>	
Using Standards to Facilitate Interoperation of Heterogeneous Microarray Databases and Analytic Tools.....	305
<i>Kei-Hoi Cheung</i>	
<b>Chapter 17</b>	
Postanalysis Interpretation: "What Do I Do with This Gene List?" .....	321
<i>Michael V. Osier</i>	
<b>Chapter 18</b>	
Combining High Dimensional Biological Data to Study Complex Diseases and Quantitative Traits .....	335
<i>Grier P. Page and Douglas M. Ruden</i>	
<b>Index</b> .....	361