
Contents

Preface	ix
Editor	xiii
Contributors	xv
Abbreviations	xix
<hr/> CHAPTER 1 Genome Analysis	<hr/> 1
SHWU-FAN MA	
<hr/> CHAPTER 2 Two Common DNA Analysis Tools	<hr/> 55
BLANCA CAMORETTI-MERCADO	
<hr/> CHAPTER 3 Phylogenetic Analysis	<hr/> 81
SHUI QING YE	
<hr/> CHAPTER 4 SNP and Haplotype Analyses	<hr/> 107
SHUI QING YE	
<hr/> CHAPTER 5 Gene Expression Profiling by Microarray	<hr/> 131
CLAUDIA C. DOS SANTOS AND MINGYAO LIU	
<hr/> CHAPTER 6 Gene Expression Profiling by SAGE	<hr/> 189
RENU TUTEJA	
<hr/> CHAPTER 7 Regulation of Gene Expression	<hr/> 219
XIAO-LIAN ZHANG AND FANG ZHENG	

CHAPTER 8 MicroRNoma Genomewide Profiling by Microarray	251
CHANG-GONG LIU, XIUPING LIU, AND GEORGE ADRIAN CALIN	
CHAPTER 9 RNAi	271
LI QIN ZHANG	
CHAPTER 10 Proteomic Data Analysis	285
YURONG GUO, RODNEY LUI, STEVEN T. ELLIOTT, AND JENNIFER E. VAN EYK	
CHAPTER 11 Protein Sequence Analysis	333
JUN WADA, HIROKO TADA, AND MASAHIRO SENO	
CHAPTER 12 Protein Function Analysis	379
LYDIE LANE, YUM LINA YIP, AND BRIGITTE BOECKMANN	
CHAPTER 13 Functional Annotation of Proteins in Murine Models	425
SHUI QING YE	
CHAPTER 14 Application of Programming Languages in Biology	449
HONGFANG LIU	
CHAPTER 15 Web Site and Database Design	505
JERRY M. WRIGHT	
CHAPTER 16 Microsoft Excel and Access	545
DMITRY N. GRIGORYEV	
Selected Web sites	583
Glossary	587
INDEX	599