
Contents

Preface	v
Contributors	xiii
1 Reciprocal Subtraction Differential RNA Display (RSDD): <i>An Efficient Technology for Cloning Differentially Expressed Genes</i> Devanand Sarkar, Dong-chul Kang and Paul B. Fisher	1
2 Cloning Differentially Expressed Genes Using Rapid Subtraction Hybridization (RaSH) Habib Boukerche, Zao-zhong Su, Dong-chul Kang, and Paul B. Fisher	15
3 The Application of Differential Display as a Gene Profiling Tool Ken Chien-Neng Chang, Barry Komm, Nichole Bayer Arnold, and Murray Korc	31
4 Serial Analysis of Gene Expression (SAGE) Fred van Ruisen and Frank Baas	41
5 Gene Expression Profile Analysis of Tumors Katia Basso and Riccardo Dalla-Favera	67
6 cDNA Microarray and Bioinformatic Analysis of Nuclear Factor- κ B Related Genes in Squamous Cell Carcinoma Zhong Chen, Tin-Lap Lee, Xin-Ping Yang, Gang Dong, Amy Loercher, and Carter Van Waes	81
7 Gene Profiling Uncovers Retinoid Target Genes Yan Ma, Qing Feng, Ian Pitha-Rowe, Sutasak Kitareewan, and Ethan Dmitrovsky	101
8 Complete Open Reading Frame (C-ORF) Technique: <i>Rapid and Efficient Method for Obtaining Complete Protein Coding Sequences</i> Dong-chul Kang and Paul B. Fisher	123
9 Chromatin Immunoprecipitation Assays: <i>Molecular Analysis of Chromatin Modification and Gene Regulation</i> Piyali Dasgupta and Srikumar P. Chellappan	135
10 Manipulating Genes and Gene Copy Number by Bacterial Artificial Chromosome Transfection Stephanie F. Phelps, Sharon Illenye, and Nicholas H. Heintz	153

11	Molecular Cytogenetic Applications in Analysis of the Cancer Genome Pulivarthi H. Rao, Subhadra V. Nandula, and Vundavalli V. Murty	165
12	Monitoring Methylation and Gene Expression in Cancer Hetty Carraway and James Herman	187
13	The Use of Phage Display Peptide Libraries for Basic and Translational Research Renee Brissette and Neil I. Goldstein	203
14	Yeast and Mammalian Two-Hybrid Systems for Studying Protein-Protein Interactions Shu-ichi Matsuzawa and John C. Reed	215
15	Ribonomic and Short Hairpin RNA Gene Silencing Methods to Explore Functional Gene Programs Associated With Tumor Growth Arrest Timothy E. Baroni, Michele T. Lastro, Aparna C. Ranganathan, Scott A. Tenenbaum, Douglas S. Conklin, and Julio A. Aguirre-Ghiso	227
16	Surface-Epitope Masking (SEM): An Immunological Subtraction Approach for Developing Monoclonal Antibodies Targeting Surface-Expressed Molecules Neil I. Goldstein and Paul B. Fisher	245
17	Approaches for Monitoring Signal Transduction Changes in Normal and Cancer Cells Paul Dent, Philip B. Hylemon, Steven Grant, and Paul B. Fisher	259
18	PKR in Innate Immunity, Cancer, and Viral Oncolysis Siddharth Balachandran and Glen N. Barber	277
19	Analysis of Transformation and Tumorigenicity Using Mouse Embryonic Fibroblast Cells Hong Sun and Reshma Taneja	303
20	Analysis of Growth Properties and Cell Cycle Regulation Using Mouse Embryonic Fibroblast Cells Hong Sun, Neriman Tuba Gulbagci, and Reshma Taneja	311

21	Reverse Phase Protein Microarrays for Monitoring Biological Responses Virginia Espina, Julia D. Wulfschlegel, Valerie S. Calvert, Emanuel F. Petricoin III, and Lance A. Liotta	321
22	Protein Crystallization Champion Deivanayagam, William J. Cook, and Mark R. Walter	337
Index	351