
Contents

Preface	v
Contributors	ix
1 Protein Arrays From cDNA Expression Libraries <i>Hendrik Weiner, Thomas Faupel, and Konrad Büssow</i>	1
2 Protein Expression Arrays for Proteomics <i>Michele Gilbert, Todd C. Edwards, and Joanna S. Albala</i>	15
3 Generation of Protein <i>In Situ</i> Arrays by DiscernArray™ Technology <i>Mingyue He</i>	25
4 Multiplexed Protein Analysis Using Spotted Antibody Microarrays <i>Brian B. Haab and Heping Zhou</i>	33
5 Target-Assisted Iterative Screening of Phage Surface Display cDNA Libraries <i>Alexei Kurakin, Susan Wu, and Dale E. Bredesen</i>	47
6 Design, Construction, and Use of Tissue Microarrays <i>Stephen M. Hewitt</i>	61
7 A Streptavidin–Biotin-Based Microarray Platform for Immunoassays <i>Petra Pavlickova and Hubert Hug</i>	73
8 Site-Specific Immobilization of Biotinylated Proteins for Protein Microarray Analysis <i>Rina Y. P. Lue, Grace Y. J. Chen, Qing Zhu, Marie-Laure Lesaichere, and Shao Q. Yao</i>	85
9 Processing of Photoaptamer Microarrays <i>Helen Petach, Rachel Ostroff, Chad Greef, and Gregory M. Husar</i>	101
10 Use of a Small Molecule-Based Affinity System for the Preparation of Protein Microarrays <i>Karin A. Hughes</i>	111
11 Evaluation of Antibodies and Microarray Coatings As a Prerequisite for the Generation of Optimized Antibody Microarrays <i>Philipp Angenendt and Jörn Glökler</i>	123
12 Printing Functional Protein Microarrays Using Piezoelectric Capillaries <i>James B. Delehanty</i>	135

13	The Use of Precision Glass Syringes and a Noncontact Microsolenoid Dispenser for the Production of High-Throughput Low-Density Arrays Arezou Azarani	145
14	A Protein Microarray ELISA for Screening Biological Fluids Susan M. Varnum, Ronald L. Woodbury, and Richard C. Zangar	161
15	Protein-Domain Microarrays Alexsandra Espejo and Mark T. Bedford	173
16	SH3 Domain Protein-Binding Arrays Sangpen Chamnongpol and Xianqiang Li	183
17	Site-Specific Peptide Immobilization Strategies for the Rapid Detection of Kinase Activity on Microarrays Mahesh Uttamchandani, Grace Y. J. Chen, Marie-Laure Lesaichere, Shao Q. Yao	191
18	Simultaneous Monitoring of Multiple Kinase Activities by SELDI-TOF Mass Spectrometry Vanitha Thulasiraman, Zheng Wang, Anjali Katrekar, Lee Lomas, and Tai-Tung Yip	205
19	Cytokine Protein Arrays Ruo-Pan Huang	215
20	Fabrication and Application of G Protein-Coupled Receptor Microarrays Ye Fang, Brian Webb, Yulong Hong, Ann Ferrie, Fang Lai, Anthony G. Frutos, and Joydeep Lahiri	233
21	ProteinChip® Array-Based Amyloid β Assays Lisa E. Bradbury, James F. LeBlanc, and Diane B. McCarthy	245
22	Serum Protein-Expression Profiling Using the ProteinChip® Biomarker System Kate Gilbert, Sharel Figueredo, Xiao-Ying Meng, Christine Yip, and Eric T. Fung	259
23	Protein Arrays for Serodiagnosis of Disease Tito Bacarese-Hamilton, Andrea Ardizzoni, Julian Gray, and Andrea Crisanti	271
Index		285