
Contents

<i>Preface</i>	<i>v</i>
<i>Contributors</i>	<i>ix</i>
1 Proteomics Analysis of Contact-Initiated Eph Receptor–Ephrin Signaling.....	1
<i>Claus Jorgensen and Alexei Poliakov</i>	
2 Control of Vascular Tube Morphogenesis and Maturation in 3D Extracellular Matrices by Endothelial Cells and Pericytes	17
<i>George E. Davis, Dae Joong Kim, Chun-Xia Meng, Pieter R. Norden, Katherine R. Speichinger, Matthew T. Davis, Annie O. Smith, Stephanie L.K. Bowers, and Amber N. Stratman</i>	
3 Analyzing Cell–Cell Interactions in 3-Dimensional Adhesion Assays.....	29
<i>Stephanie L.K. Bowers and Troy A. Baudino</i>	
4 Production of Spontaneously Beating Neonatal Rat Heart Tissue for Calcium and Contractile Studies	45
<i>Fnu Gerilechaogetu, Hao Feng, Honey B. Golden, Damir Nizamutdinov, Donald M. Foster, Shannon Glaser, and David E. Dostal</i>	
5 Paracrine Communication Between Mechanically Stretched Myocytes and Fibroblasts	57
<i>Hao Feng, Fnu Gerilechaogetu, Honey B. Golden, Damir Nizamutdinov, Donald M. Foster, Shannon Glaser, and David E. Dostal</i>	
6 Assessing Blood–Brain Barrier Function Using In Vitro Assays.....	67
<i>Joseph Bressler, Katherine Clark, and Cliona O’Driscoll</i>	
7 Methods to Assess Tissue Permeability	81
<i>Juan C. Ibla and Joseph Khoury</i>	
8 In Vivo Quantification of Metastatic Tumor Cell Adhesion in the Pulmonary Microvasculature	89
<i>F. Bartsch, M.L. Kang, S.T. Mees, J. Haier, and P. Gassmann</i>	
9 Cell Membrane Vesicles as a Tool for the Study of Direct Epithelial–Stromal Interaction: Lessons from CD147	103
<i>Eric Gabison, Farah Khayati, Samia Mourah, and Suzanne Menashi</i>	
10 Microencapsulation of Stem Cells to Study Cellular Interactions.....	113
<i>Keith Moore, Adam Vandergriff, and Jay D. Potts</i>	
11 Cell-Surface Protein–Protein Interaction Analysis with Time-Resolved FRET and Snap-Tag Technologies	121
<i>Timothy N. Feinstein</i>	
12 Single Cell Analysis of Lipid Rafts.....	131
<i>William T. Lee</i>	

13	Micropatterning Cell Adhesion on Polyacrylamide Hydrogels.....	147
	<i>Jian Zhang, Wei-hui Guo, Andrew Rape, and Yu-li Wang</i>	
14	Measuring Cell–Cell Tugging Forces Using Bowtie-Patterned mPADs (Microarray Post Detectors).....	157
	<i>Daniel M. Cohen, Mike T. Yang, and Christopher S. Chen</i>	
15	Generation and Analysis of Biosensors to Measure Mechanical Forces Within Cells.....	169
	<i>Katharina Austen, Carleen Kluger, Andrea Freikamp, Anna Chrostek-Grashoff, and Carsten Grashoff</i>	
16	Proteomic Analysis of the Left Ventricle Post-myocardial Infarction to Identify In Vivo Candidate Matrix Metalloproteinase Substrates.....	185
	<i>Andriy Yabluchanskiy, Yaojun Li, Lisandra E. de Castro Brás, Kevin Hakala, Susan T. Weintraub, and Merry L. Lindsey</i>	
	<i>Index.....</i>	201

Cell-Cell Interactions

Methods and Protocols

Baudino, T.A. (Ed.)

2013, XII, 204 p. 40 illus., 21 illus. in color., Hardcover

ISBN: 978-1-62703-603-0

A product of Humana Press