

---

# Contents

<i>Preface</i> . . . . .	<i>v</i>
<i>Contributors</i> . . . . .	<i>ix</i>
1 Virtual Screening for Lead Discovery . . . . . <i>Yat T. Tang and Garland R. Marshall</i>	1
2 Computer-Aided Drug Discovery and Development . . . . . <i>Shuxing Zhang</i>	23
3 Using Active Site Mapping and Receptor-Based Pharmacophore Tools: Prelude to Docking and De Novo/Fragment-Based Ligand Design . . . . . <i>Ashutosh Tripathi, J. Andrew Surface, and Glen E. Kellogg</i>	39
4 Methods for Evaluation of Structural and Biological Properties of Antiinvasive Natural Products. . . . . <i>Mudit Mudit, Mohammad Khanfar, Girish V. Shah, and Khalid A. El Sayed</i>	55
5 Solid-Phase Peptide Synthesis Using Microwave Irradiation . . . . . <i>Justin K. Murray, Jennifer Aral, and Les P. Miranda</i>	73
6 Fluorescent and Lanthanide Labeling for Ligand Screens, Assays, and Imaging . . . . . <i>Jatinder S. Josan, Channa R. De Silva, Byunghee Yoo, Ronald M. Lynch, Mark D. Pagel, Josef Vagner, and Victor J. Hruby</i>	89
7 DNA-Directed Assembly Microarray for Protein and Small Molecule Inhibitor Screening . . . . . <i>Ng Jin Kiat, Fritz Simeon, Too Heng Phon, and Parayil Kumaran Ajikumar</i>	127
8 Selection of Peptide Ligands for Human Placental Transcytosis Systems Using In Vitro Phage Display . . . . . <i>Saleem Basha, Shruthi Vaidhyathan, and Giovanni M. Pauletti</i>	141
9 Optimization of the Tetrazolium Dye (MTT) Colorimetric Assay for Cellular Growth and Viability. . . . . <i>Paul W. Sylvester</i>	157
10 Imaging NF- $\kappa$ B Signaling in Mice for Screening Anticancer Drugs . . . . . <i>Delira Robbins and Yunfeng Zhao</i>	169
11 Evaluation of Anticancer Agents Using Flow Cytometry Analysis of Cancer Stem Cells . . . . . <i>Vineet Gupta, Qian-Jin Zhang, and Yong-Yu Liu</i>	179
12 Chemical Screening with Zebrafish Embryos . . . . . <i>Hanbing Zhong and Shuo Lin</i>	193

13	iTRAQ™ Labeling Coupled with LC-MALDI Mass Spectrometry for Monitoring Temporal Response of Colorectal Cancer Cells to Butyrate Treatment . . . . .	207
	<i>Hwee Tong Tan, Teck Kwang Lim, Maxey C.M. Chung, and Qingsong Lin</i>	
14	Heterotypic Cell Adhesion Assay for the Study of Cell Adhesion Inhibition . . . . .	225
	<i>Seetharama D. Satyanarayanajois, Sharon Ronald, and Jining Liu</i>	
15	Evaluation of Antibacterial Activity of Proteins and Peptides Using a Specific Animal Model for Wound Healing. . . . .	245
	<i>Ramar Perumal Samy, Maung Maung Thwin, Vincent T.K. Chow, Ho Bow, and Ponnampalam Gopalakrishnakone</i>	
16	In Vitro Immunogenicity Risk Assessment of Therapeutic Proteins in Preclinical Setting . . . . .	267
	<i>Puneet Gaitonde and Sathy V. Balu-Iyer</i>	
	<i>Index. . . . .</i>	281



<http://www.springer.com/978-1-61779-011-9>

Drug Design and Discovery

Methods and Protocols

Satyanarayanajois, S.D. (Ed.)

2011, XII, 69 p., Hardcover

ISBN: 978-1-61779-011-9

A product of Humana Press