
Contents

Preface	v
Contributors	ix

PART I: COMMON STRATEGIES

1	Fundamentals of Modern Peptide Synthesis <i>Muriel Amblard, Jean-Alain Fehrentz, Jean Martinez, and Gilles Subra</i>	3
2	Chimerism: A Strategy to Expand the Utility and Applications of Peptides <i>John Howl</i>	25

PART II: SYNTHETIC METHODOLOGIES AND APPLICATIONS

3	Modification of Peptides and Other Drugs Using Lipoamino Acids and Sugars <i>Joanne T. Blanchfield and Istvan Toth</i>	45
4	Synthesis of Linear, Branched, and Cyclic Peptide Chimera <i>Gábor Mezö and Ferenc Hudecz</i>	63
5	Synthesis of Cell-Penetrating Peptides for Cargo Delivery <i>Margus Pooga and Ülo Langel</i>	77
6	Incorporation of the Phosphotyrosyl Mimetic 4(Phosphonodifluoromethyl)phenylalanine (F ₂ Pmp) Into Signal Transduction-Directed Peptides <i>Zhu-Jun Yao, Kyeong Lee, and Terrence R. Burke, Jr.</i>	91
7	Expressed Protein Ligation for Protein Semisynthesis and Engineering <i>Zuzana Machova and Annette G. Beck-Sickinger</i>	105
8	Cellular Delivery of Peptide Nucleic Acid by Cell-Penetrating Peptides <i>Kalle Kilk and Ülo Langel</i>	131
9	Quenched Fluorescent Substrate-Based Peptidase Assays <i>Rebecca A. Lew, Nathalie Tochon-Danguy, Catherine A. Hamilton, Karen M. Stewart, Marie-Isabel Aguilar, and A. Ian Smith</i>	143

10	A Convenient Method for the Synthesis of Cyclic Peptide Libraries Gregory T. Bourne, Jonathon L. Nielson, Justin F. Coughlan, Paul Darwen, Marc R. Campitelli, Douglas A. Horton, Andreas Rhümann, Stephen G. Love, Tran T. Tran, and Mark L. Smythe	151
11	High-Throughput Peptide Synthesis Michal Lebl and John Hachmann	167
12	Backbone Amide Linker Strategies for the Solid-Phase Synthesis of C-Terminal Modified Peptides Jordi Alsina, Steven A. Kates, George Barany, and Fernando Albericio	195
13	Synthesis of Peptide Bioconjugates Ferenc Hudecz	209
PART III: PRACTICAL GUIDES		
14	Protein Identification by Mass Spectrometric Analyses of Peptides Ashley Martin	227
15	Manual Solid-Phase Synthesis of Glutathione Analogs: <i>A Laboratory-Based Short Course</i> Ursel Soomets, Mihkel Zilmer, and Ülo Langel	241
Index	259



<http://www.springer.com/978-1-58829-317-6>

Peptide Synthesis and Applications

Howl, J. (Ed.)

2005, X, 262 p. 69 illus., Hardcover

ISBN: 978-1-58829-317-6

A product of Humana Press