

1. Record Nr.	UNINA9911020146103321
Titolo	Peptides as drugs : discovery and development / / edited by Bernd Groner
Pubbl/distr/stampa	Weinheim, : Wiley-VCH, c2009
ISBN	9786612460852 9781282460850 1282460854 9783527626847 3527626840 9783527626830 3527626832
Descrizione fisica	1 online resource (244 p.)
Altri autori (Persone)	GronerB (Bernd)
Disciplina	615.19 615.3
Soggetti	Drugs - Design Peptide drugs
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Peptides as Drugs; Contents; Preface; List of Contributors; 1: Peptides as Drugs: Discovery and Development; 1.1 Discovery of New Potential Drug Targets and the Limitations of Druggability; 1.2 Protein Interaction Domains Are at the Core of Signaling Pathways; 1.3 Peptides as Inhibitors of Protein Interactions; References; 2: Mimics of Growth Factors and Cytokines; 2.1 Introduction; 2.2 The Cytokines; 2.2.1 The Receptors; 2.2.2 "Simple" Receptors; 2.2.3 "Complex" Receptors; 2.3 Defining Receptor Recognition Sites in Cytokines Using Chimeric Proteins 2.4 Receptor Recognition Sites are Organized as Exchangeable Modules 2.5 The Concept of Fusing the Cytokine to the Soluble Receptor: Hyper-IL-6; 2.6 Antagonists Specifically Inhibiting IL-6 Trans-Signaling; 2.7 In Vitro Evolution of Peptides and Proteins; 2.7.1 Platforms for the Selection of High-Affinity Binders; 2.7.2 Agonists and Antagonists of Cytokines and Growth Hormones; 2.8 Concluding

Remarks; References; 3: Peptides Derived from Exon v6 of the CD44 Extracellular Domain Prevent Activation of Receptor Tyrosine Kinases and Subsequently Angiogenesis and Metastatic Spread of Tumor Cells
 3.1 Introduction 3.2 CD44 Proteins and Their Involvement in RTK Activation; 3.3 CD44v6 Acts as a Coreceptor for c-Met and Ron; 3.4 Three Amino Acids in CD44 Exon v6 Are Crucial for the CD44v6 Coreceptor Function, and Small Peptides Can Interfere with This Function; 3.5 The Ectodomain of CD44v6 Binds to HGF; 3.6 Peptides Corresponding to Exon v6 of CD44 Inhibit Metastatic Spread of Tumor Cells; 3.7 The Significance of the Collaboration between CD44v6 and c-Met In Vivo; 3.8 The CD44v6 Peptides Interfere with Angiogenesis; 3.9 Outlook; References
 4: Peptide Aptamers Targeting the Viral E6 Oncoprotein Induce Apoptosis in HPV-positive Cancer Cells 4.1 Human Papillomaviruses and Oncogenesis; 4.1.1 Cervical Cancer; 4.1.2 The E6 and E7 Genes; 4.2 Peptide Aptamers Targeting the HPV E6 Oncoprotein; 4.3 E6-Targeting Peptide Aptamers: Therapeutic Perspectives; 4.3.1 Therapeutic Target Protein Evaluation by Peptide Aptamers; 4.3.2 The Intrinsic Therapeutic Potential of Peptide Aptamers; 4.3.3 Identification of Functional Peptide Mimics by Displacement Screening; 4.4 Perspectives; References
 5: The Prevention of HIV Infection with Viral Entry Inhibitors 5.1 Introduction: The Potential of Peptides as Drugs in the Treatment of HIV Infection; 5.2 The HIV Entry Process; 5.3 Peptides that Inhibit Receptor or Coreceptor Binding; 5.3.1 Physiological Antimicrobial Peptides; 5.3.1.1 Defensins; 5.3.2 Chemokines; 5.3.3 Synthetic Peptides and Peptidomimetics; 5.4 Inhibitors of the Viral and Cellular Membrane Fusion Process; 5.5 Entry Inhibitory Peptides Selected by the Phage Display Technology; 5.6 Limitations of Peptides in the Treatment of HIV Infection
 5.7 Strategies to Prolong the In Vivo Half-Life of Antiviral Peptides

Sommario/riassunto

By covering the full spectrum of topics relevant to peptidic drugs, this timely handbook serves as an introductory reference for both drug developers and biomedical researchers interested in pharmaceutically active peptides, presenting both the advantages and challenges associated with this molecular class. The first part discusses current approaches to developing pharmaceutically active peptides, including case studies of the use of peptidic drugs in cancer and AIDS therapy. The second part surveys strategies for the development and targeting of peptidic drugs. With its integration of b