1. Record Nr. UNINA9910821269603321 Autore Guarna Antonio Titolo Peptidomimetics in organic and medicinal chemistry / / Andrea Trabocchi and Antonio Guarna Pubbl/distr/stampa Chichester, West Sussex, United Kingdom:,: John Wiley & Sons,, 2014 ©2014 **ISBN** 1-118-68314-5 1-118-68303-X 1-118-68384-6 Descrizione fisica 1 online resource (320 p.) Classificazione SCI013050 Disciplina 615.1/9 Soggetti Peptide drugs Proteins - Therapeutic use Drugs - Design Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Cover; Title Page; Copyright; Contents; Preface; Abbreviations; Part I The Basics of Peptidomimetics: Chapter 1 The Basics of Peptidomimetics; 1.1 Introduction; 1.2 Definition and Classification; 1.3 Strategic Approaches to Peptidomimetic Design; 1.3.1 Modification of Amino Acids: 1.3.2 Compounds with Global Restrictions: 1.3.3 Molecular Scaffolds Mimicking the Peptidic Backbone; 1.4 Successful Examples of Peptidomimetic Drugs; 1.4.1 ACE Inhibitors; 1.4.2 Thrombin Inhibitors; 1.5 Conclusion; References; Chapter 2 Synthetic Approaches towards Peptidomimetic Design; 2.1 Introduction 2.2 Local Modifications 2.2.1 Single Amino Acid Modifications; 2.2.2 Dipeptide Isosteres: 2.2.3 Retro-inverso Peptides: 2.2.4 N-Methylation of Peptides; 2.2.5 Azapeptides; 2.2.6 Peptoids; 2.3 Global Restrictions through Cyclic Peptidomimetics; 2.4 Peptidomimetic Scaffolds; 2.5 Conclusions: References: Part II Synthetic Methods and Molecules: Chapter 3 Peptidomimetic Bioisosteres; 3.1 Introduction; 3.2 Peptide Bond Isosteres; 3.2.1 Thioamides; 3.2.2 Esters; 3.2.3 Alkenes and

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"A peptidomimetic is a small protein-like chain designed to mimic a peptide with adjusted molecular properties such as enhanced stability or biological activity. It is a very powerful approach for the generation of small-molecule-based drugs as enzyme inhibitors or receptor ligands. Peptidomimetics in Organic and Medicinal Chemistry outlines the concepts and synthetic strategies underlying the building of bioactive compounds of a peptidomimetic nature. Topics covered include the chemistry of unnatural amino acids, peptide- and scaffold-based peptidomimetics, amino acid-side chain isosteres, backbone isosteres, dipeptide isosteres, beta-turn peptidomimetics, proline-mimetics as turn inducers, cyclic scaffolds, amino acid surrogates, and scaffolds for combinatorial chemistry of peptidomimetics. Case studies in the hit-to-lead process, such as the development of integrin ligands and thrombin inhibitors, illustrate the successful application of peptidomimetics in drug discovery"--

"Peptidomimetics in Organic and Medicinal Chemistry outlines the concepts and synthetic strategies underlying the building of bioactive compounds of a peptidomimetic nature"--