Pseudo Peptides In Drug Discovery

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Lipophilicity in Drug Action and Toxicology - Vladimir Pliska 2008-09-26
In keeping with the outstanding importance of lipophilicity in biosciences, this volume examines all its facets in more than twenty contributions from leading experts. It offers a thorough and highly topical survey of this rapidly developing field of research. Color plates demonstrating structural aspects, a vast number of references, and the straightforward presentation of the material make this volume a invaluable tool for all researchers involved in drug design or in the investigation of drug action.
Peptide Macrocycles - Matthew B. Coppock 2021-11-02
This volume explores the latest techniques and strategies used to study the field of peptide macrocycles. The chapters in this book ae organized into four parts: macrocycles synthesis, combinational library synthesis and screening, macrocycle characterization, and unique applications. Part One looks at a variety of peptide cyclization methodologies, and Part Two describes methods for the creation of peptide macrocycles libraries and their subsequent screening against biological targets of interest. Part Three discusses the study and characterization of peptide macrocycle-target interactions, and Part Four introduces unique applications for peptide macrocycles, from higher-order structure formation to post-synthetic functional modifications. Written in the highly successful Methods in Molecular Biology series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and tips on troubleshooting and avoiding known pitfalls. Cutting-edge and comprehensive, Peptide Macrocycles: Methods and Protocols is a valuable resource for both novice and expert researchers looking to learn more about this developing field.
Current Pharmaceutical Design - 1995-08

Molecular Pathomechanisms and New Trends in Drug Research - Gyorgy Keri 2002-11-14
Knowledge of the basic mechanisms of human disease is essential for any student or professional engaged in drug research and development. Functional gene analysis (genomics), protein analysis (proteomics), and other molecular biological techniques have made it possible to understand these cellular processes, opening up exciting opportunities for no
European Journal of Organic Chemistry - 2007

Smith and Williams' Introduction to the Principles of Drug Design and Action - H. Jphn Smith 2005-10-10
Advances in knowledge and technology have revolutionized the process of drug development, making it possible to design drugs for a given target or disease. Building on the foundation laid by the previous three editions, Smith and Williams Introduction to the Principles of Drug Design and Action, Fourth Edition includes the latest informatio
Peptide-Based Drug Design - Laszlo Otvos 2010-11-19
Due to their high specificity and low toxicity profile, peptides have once again become central to the development of new drugs. In Peptide-Based Drug Design: Methods and Protocols, expert researchers provide a handbook which offers a selection of research and production tools suitable for transforming a promising protein fragment or stand-alone native peptide into a pharmaceutically acceptable composition. The volume delves into contemporary, cutting-edge subjects such as hit isolation and target validation, computer-aided design, sequence modifications to satisfy pharmacologists, in vivo stability and imaging, and the actual production of difficult sequences. Written in the highly successful Methods in Molecular BiologyTM series format, chapters include readily reproducible, step-by-step laboratory protocols, lists of materials, and the Notes section, which highlights tips on troubleshooting and avoiding known pitfalls. Comprehensive and up-to-date, Peptide-Based Drug Design: Methods and Protocols shows its subject to be an independent science on the rise, and provides scientists with a clear, concise guide for continuing this vital research.
Biomedical Chemistry - Nuno Vale 2015-01-01
Biomedical Chemistry provides readers with an understanding of how fundamental chemical concepts are used to combat some diseases. The authors explain the interdisciplinary relationship of chemistry with biology, physics, pharmacy and medicine. The results of chemical research can be applied to understand chemical processes in cells and in the body, and new methods for drug transportation. Also, basic chemical ideas and determination of disease etiology are approached by developing techniques to ensure optimum interaction between drugs and human cells. This Book is an excellent resource for students and researchers in health-related fields with frontier topics in medicinal and pharmaceutical chemistry, organic chemistry and biochemistry.
Molecular Science for Drug Development and Biomedicine - Wei-Zhu Zhong 2018-10-08
This book is a printed edition of the Special Issue "Molecular Science for Drug Development and Biomedicine" that was published in IJMS
Molecular Technology, Volume 2 - Hisashi Yamamoto 2018-12-10
Edited by foremost leaders in chemical research together with a number of distinguished international authors, Volume 2 presents the most important and promising recent chemical developments in life sciences, neatly summarized in one book. Interdisciplinary and application-oriented, this ready reference focuses on methods and processes with a high practical aspect, covering new trends in drug delivery, in-vivo analysis, structure formation and much more. Of great interest to chemists and life scientists in academia and industry.
Hydrolysis in Drug and Prodrug Metabolism - Bernard Testa 2003-08
Many drugs and other xenobiotics (e.g., preservatives, insecticides, and plastifiers) contain hydrolyzable moieties such as ester or amide groups. In biological media, such foreign compounds are, therefore, important substrates for hydrolytic reactions catalyzed by hydrolases or proceeding non-enzymatically. Despite their significance, until now, no book has been dedicated to hydrolysis and hydrolases in the metabolism of drugs and other xenobiotics. This work fills a gap in the literature and reviews metabolic reactions of hydrolysis and hydarion from the point of views of enzymes, substrates, and reactions.
Chemometrics - Foo-Tim Chau 2004-04-23
Wavelet Transformations and Their Applications in Chemistry pioneers a new approach to classifying existing chemometric techniques for data analysis in one and two dimensions, using a practical applications approach to illustrating chemical examples and problems. Written in a simple, balanced, applications-based style, the book is geared to both theorists and non-mathematicians. This text emphasizes practical

applications in chemistry. It employs straightforward language and examples to show the power of wavelet transforms without overwhelming mathematics, reviews other methods, and compares wavelets with other techniques that provide similar capabilities. It uses examples illustrated in MATLAB codes to assist chemists in developing applications, and includes access to a supplementary Web site providing code and data sets for work examples. Wavelet Transformations and Their Applications in Chemistry will prove essential to professionals and students working in analytical chemistry and process chemistry, as well as physical chemistry, spectroscopy, and statistics.

Peptide and Protein Design for Biopharmaceutical Applications - Knud Jensen 2009-09-01

Peptides serve as effective drugs in the clinic today. However the inherent drawbacks of peptide structures can limit their efficacy as drugs. To overcome this researchers are developing new methods to create ‘tailor-made’ peptides and proteins with improved pharmacological properties. Design of Peptides and Proteins provides an overview of the experimental and computational methods for peptide and protein design, with an emphasis on specific applications for therapeutics and biomedical research. Topics covered include: Computer modeling of peptides and proteins Peptidomimetics Design and synthesis of cyclic peptides Carbohydrates in peptide and protein design De novo design of peptides and proteins Medical development applications An extended case study – the design of insulin variants Design of Peptides and Proteins presents the state-of-the-art of this exciting approach for therapeutics, with contributions from international experts. It is an essential resource for academic and industrial scientists in the fields of peptide and protein drug design, biomedicine, biochemistry, biophysics, molecular modelling, synthetic organic chemistry and medicinal/pharmaceutical chemistry.

Drug Design and Discovery in Alzheimer’s Disease - Atta-ur-Rahman 2015-06-27

Drug Design and Discovery in Alzheimer’s Disease includes expert reviews of recent developments in Alzheimer's disease (AD) and neurodegenerative disease research. Originally published by Bentham as Frontiers in Drug Design and Discovery, Volume 6and now distributed by Elsevier, this compilation of the sixteen articles, written by leading global researchers, focuses on key developments in the understanding of the disease at molecular levels, identification and validation of molecular targets, as well as innovative approaches towards drug discovery, development, and delivery. Beginning with an overview of AD pharmacotherapy and existing blockbuster drugs, the reviews cover the potential of both natural and synthetic small molecules; the role of cholinesterases in the on-set and progression of AD and their inhibition; the role of beta-site APP clearing enzyme-1 (BACE-1) in the production of ß-amyloid proteins, one of the key reasons of the progression of AD; and other targets identified for AD drug discovery. Edited and written by leading experts in Alzheimer’s disease (AD) and other neurodegenerative disease drug development Describes existing drugs for AD and current molecular understanding of the condition Reviews recent advances in the field, including coverage of cholinesterases, BACE-1, and other drug development targets

Solid-Phase Peptide Synthesis - Gregg B. Fields 1997-11-04

The critically acclaimed laboratory standard for more than forty years, Methods in Enzymology is one of the most highly respected publications in the field of biochemistry. Since 1955, each volumehas been eagerly awaited, frequently consulted, and praised by researchers and reviewers alike. More than 275 volumes have been published (all of them still in print) and much of the material is relevant even today-truly an essential publication for researchers in all fields of life sciences. Key Features * Solid-phase peptide synthesis * Applications of peptides for structural and biological studies * Characterization of synthetic peptides

Peptides for Youth - Susan Valle 2009-06-23

The American Peptide Society (APS) provides a forum for advancing and promoting knowledge of the chemistry and biology of peptides. The approximately one thousand members of the Society come from North America and from more than thirty other countries throughout the world. Establishment of the APS was a result of the rapid worldwide growth that has occurred in peptide-related research, and of the increasing interaction of peptide scientists with virtually all fields of science. Peptides for Youth: The Proceedings of the the 20th American Peptide Symposium will highlight many of the recent developments in peptide science, with a particular emphasis on how these advances are being applied to basic problems in biology and medicine. The 20th American Peptide Symposium will take place June 26 - 30, 2007 in Montreal, Canada.

Combinatorial Chemistry - Günther Jung 2008-07-11

The story of success goes on and on - with a new book on combinatorial chemistry, edited by Gunther Jung! Combinatorial chemistry is a proven time- and resource-saving synthetic method of outstanding importance for industrial processes. Compound libraries help to save time and money, especially in the search for new drugs, and therefore play a pivotal role in solving the problem of the worldwide increasing demand for new and more active drugs. Not only substances, which are of interest for pharmaceutical chemistry, but also materials, catalysts, and biomolecules such as DNA or oligosaccharides are readily available with high structural diversities. The broad scope of combinatorial sciences is reflected by this book, edited by Gunther Jung: The synthetic methods discussed range from solid-phase to solution-phase synthesis, from preparations of small molecules such as amines or alcohols to those of complex biomolecules. Feasible methods, efficient techniques, new trends in automation, and state-of-the-art fast instrumental analytical and screening methods are presented with many practical tips and tricks for everybody working in combinatorial chemistry. This is the book written by specialists for specialists and for everyone aspiring to become an insider! It is an indispensible source of information for researchers working in organic synthesis, catalysis, biochemistry, and biotechnology, pharmaceutical and clinical chemistry, material sciences, and analytical chemistry.

Medicinal Chemistry and Drug Design - Deniz Ekinci 2012-05-16

Over the recent years, medicinal chemistry has become responsible for explaining interactions of chemical molecules processes such that many scientists in the life sciences from agronomy to medicine are engaged in medicinal research. This book contains an overview focusing on the research area of enzyme inhibitors, molecular aspects of drug metabolism, organic synthesis, prodrug synthesis, in silico studies and chemical compounds used in relevant approaches. The book deals with basic issues and some of the recent developments in medicinal chemistry and drug design. Particular emphasis is devoted to both theoretical and experimental aspect of modern drug design. The primary target audience for the book includes students, researchers, biologists, chemists, chemical engineers and professionals who are interested in associated areas. The textbook is written by international scientists with expertise in chemistry, protein biochemistry, enzymology, molecular biology and genetics many of which are active in biochemical and biomedical research. We hope that the textbook will enhance the knowledge of scientists in the complexities of some medicinal approaches; it will stimulate both professionals and students to dedicate part of their future research in understanding relevant mechanisms and applications of medicinal chemistry and drug design.

Computer Aided Drug Design in Industrial Research - E.C. Herrmann 2013-03-09

The Ernst Schering Research Foundation sponsored its 15th workshop in Berlin on October 19-21, 1994. Leading scientists from Europe and North America were invited to discuss computer-aided drug design in industrial research. Computer-aided drug design is a very exciting field and an intellec tual challenge, like playing chess. But these reasons are no longer suf ficient to justify using this method in industry, if they ever were. Fig. 1. The participants of the workshop VI Preface Therefore, when we, together with Prof. Hoyer, started to think about this workshop, our intentions quickly became clear. We were not so much interested in the very latest developments of methods or in computer-aided drug design itself - enough conferences have dealt with these topics. However, we were very interested in the usefulness and limitations of computer-aided drug design in the indu strial research process. A lot has changed in the pharmaceutical industry recently. These changes are gaining momentum, so it is the right time to think about the role of computer-aided drug design in this changing environment.

Multi-Scale Approaches in Drug Discovery - Alejandro Speck-Planche 2017-02-14

Drug discovery is an expensive, time-consuming process and the modern drug discovery community is constantly challenged not only with discovering novel bioactive agents to combat resistance from known diseases and fight against new ones, but to do so in a way that is economically effective. Advances in both experimental and theoretical/computational methods envisage that the greatest challenges in drug discovery can be most successfully addressed by using a multi-scale approach, drawing on the specialties of

a whole host of different disciplines. Multi-Scale Approaches to Drug Discovery furnishes chemists with the detail they need to identify drug leads with the highest potential before isolating and synthesizing them to produce effective drugs with greater swiftness than classical methods may allow. This significantly speeds up the search for more efficient therapeutic agents. After an introduction to multi-scale approaches outlining the need for and benefits of their use, the book goes on to explore a range of useful techniques and research areas, and their potential applications to this process. Profiling drug binding by thermodynamics, machine learning for predicting enzyme sub-classes, and multitasking models for computer-aided design and virtual compound screening are discussed, before the book goes on to review Alkaloid Menispermaceae leads, natural chemotherapeutic agents and methods for speeding up the design and virtual screening of therapeutic peptides. Flavonoids as multi-target compounds are then explored, before the book concludes with a review of Quasi-SMILES as a novel tool. Collecting together reviews and original research contributions written by leading experts in the field, Multi-Scale Approaches to Drug Discovery highlights cutting-edge approaches and practical examples of their implementation for those involved in the drug discovery process at many different levels. Using the combined knowledge of medicinal, computational, pharmaceutical and bio- chemists, it aims to support growth in the multi-scale approach to promote greater success in the development of new drugs. Offers practical guidance on ways to implement multiscale approaches for increased efficiency in drug discovery Draws on the experience of a highly skilled team of authors under the editorial guidance of one of the field's leading experts Includes cutting-edge techniques at the forefront of medicinal chemistry and drug discovery optimization

Peptides for the New Millennium - Gregg B. Fields 2006-05-17

“Have you tried peptides? Small proteins, the best in the land! Won’t you try peptides? Keep all your body processes in hand! For labor and lactation oxytocin you must buy! Enkephalin always gives a good runner’s high! So won’t you try peptides? Small proteins, the best in the land!” The above words [1], penned by Gary Gisselman to open Peptide Ångst: La Triviata, the opera which made its world premiere on July 1, 1999, also serve as a fitting charge to the th 16 American Peptide Symposium. This latest edition of a premier biennial series was held under the auspices of the American Peptide Society, June 26–July 1, 1999, at the Minneapolis Convention Center, Minneapolis,Minnesota, with the undersigned serving as Co-Chairs. The fortunate coincidence of the calendar allowed us to set as the theme “Peptides for the New Millennium”, and in our judgment, the approximately 1200 participants [2] who converged in the Twin Cities from academic and industrial institutions in 36 countries were treated to an exciting and stimulating conference that left most everyone with an enthusiastic vision for the future of our field. The present Proceedings volume should serve as a handy reference source and succinct snapshot of peptide science at essentially its century mark – the clock having started with the initial contributions of Emil Fischer and Th. Curtius.

Structure-Based Drug Design - Pandi Veerapandian 2018-03-29

Introducing the most recent advances in crystallography, nuclear magnetic resonance, molecular modeling techniques, and computational combinatorial chemistry, this unique, interdisciplinary reference explains the application of three-dimensional structural information in the design of pharmaceutical drugs. Furnishing authoritative analyses by world-renowned experts, Structure-Based Drug Design discusses protein structure-based design in optimizing HIV protease inhibitors and details the biochemical, genetic, and clinical data on HIV-1 reverse transcriptase presents recent results on the high-resolution three-dimensional structure of the catalytic core domain of HIV-1 integrase as a foundation for divergent combination therapy focuses on structure-based design strategies for uncovering receptor antagonists to treat inflammatory diseases demonstrates a systematic approach to the design of inhibitory compounds in cancer treatment reviews current knowledge on the Interleukin-1 (IL-1) system and progress in the development of IL-1 modulators describes the influence of structure-based methods in designing capsid-binding inhibitors for relief of the common cold and much more!

Advances in Drug Research - 1997-07-21

This volume continues the trend for Advances in Drug Research of shorter, but more frequent volumes. In line with the tradition of the series, chapters on general themes are interspersed with chapters on specific drug classes and targets.

Contrasts in Scientific Style - Joseph Stewart Fruton 1990

Biophysical and Computational Tools in Drug Discovery - Anil Kumar Saxena 2021-10-18

This book reviews recent physicochemical and biophysical techniques applied in drug discovery research, and it outlines the latest advances in computational drug design. Divided into 10 chapters, the book discusses about the role of structural biology in drug discovery, and offers useful application cases of several biophysical and computational methods, including time-resolved fluorometry (TRF) with Förster resonance energy transfer (FRET), X-Ray crystallography, nuclear magnetic resonance spectroscopy, mass spectroscopy, generative machine learning for inverse molecular design, quantum mechanics/molecular mechanics (QM/MM,ONIOM) and quantum molecular dynamics (QMT) methods. Particular attention is given to computational search techniques applied to peptide vaccines using novel mathematical descriptors and structure and ligand-based virtual screening techniques in drug discovery research. Given its scope, the book is a valuable resource for students, researchers and professionals from pharmaceutical industry interested in drug design and discovery.

Biophysical Techniques in Drug Discovery - Angeles Canales 2017-11-20

With perspectives from academia and industry across a spectrum of techniques, this is a go-to volume for biophysicists, analytical chemists and medicinal chemists looking for a broad overview of techniques of contemporary interest in drug discovery.

Peptide Libraries - Ratmir Derda 2015-01-24

This volume provides an overview of modern and emerging methods for production, analysis, and utility of peptide libraries. Chapter focus on methods and techniques for synthesis, genetic expression, hybrid synthesis-expression, examples of modern utility of these libraries, de novo discovery of reactions, hybrid organic-inorganic materials and, emerging tools for the analysis of these libraries by method of genetic selection and next-generation sequencing. Written in the highly successful Methods in Molecular Biology series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and tips on troubleshooting and avoiding known pitfalls. Authoritative and practical, Peptide Libraries: Methods and Protocols seeks to serve both professionals and novices with its well-honed methodologies.

Synthetic Peptides - Gregory A. Grant 2002

The first synthetic peptides were produces a century ago. In the ensuing period, they have developed as valuable research tools that are readily available to all researchers. However, since most reasearchers do not make their own peptides, they are often unfamiliar with not only the synthetic chemistry, but also with important and useful aspects of design, analysis, handling, and applications. This volume is written by experts in the field who provide detailed descriptions as well as practical advice for producing and using synthetic peptides. Chapters cover peptide design considerations, the synthetic chemistry, the evaluation of the synthetic product, and the modern applications of synthetic peptides. (Midwest).

Pseudo-peptides in Drug Discovery - Peter E. Nielsen 2006-03-06

Peptides are among the most versatile bioactive molecules, yet the do not make good drugs, because they are quickly degraded or modified in the body. To overcome this problem, stable and at the same time biologically active pseudo-peptides have been developed. These novel compounds open up new perspectives in drug design by providing an entire range of highly specific and non-toxic pharmaceuticals. This is the first work devoted to the topic and draws together knowledge gained on different types of peptidomimetics and other pseudo-peptides with drug properties. As such, it includes peptoids, beta-peptides, polyamide DNA binders as well as peptide nucleic acids. The expert authors and editor discuss chemical properties and stability, biological activity and reactivity, as well as practical aspects of synthesis, making this a prime resource for drug developers and bioorganic chemists working with these compounds.

Neuropeptides in Neuroprotection and Neuroregeneration - Fred Nyberg 2012-06-19

Although the genomic era is no longer in its infancy, the life sciences are still facing questions about the role of endogenous proteins and peptides in homeostasis and pathologies. Delving into one of the most current fields of interest in biology and medicine, Neuropeptides in Neuroprotection and Neuroregeneration describes the impact of neuropeptides on neuroprotection and neuroregeneration. The book begins with chapters describing important features of the endogenous neuropeptide systems related to their formation, receptor signaling, and inactivation. It includes chapters focused on the design and

development of peptide-like drugs (peptidomimetics). In addition, the book covers: General aspects regarding the biosynthesis, structures, and distribution of neuroactive peptides and their receptors Basic mechanisms for neuropeptide action, metabolism, as well as techniques for their detection and aspects essential for the cellular mechanisms underlying brain pathology Neuropeptides known for their impact in neurodegenerative and neuroprotective processes Fundamental aspects as well as recent progress in the development of peptidomimetics of neuroprotective and cognition-enhancing peptides

Chemical Synthetic Biology - Pier Luigi Luisi 2011-02-10

Chemistry plays a very important role in the emerging field of synthetic biology. In particular, chemical synthetic biology is concerned with the synthesis of chemical structures, such as proteins, that do not exist in nature. With contributions from leading international experts, Chemical Synthetic Biology shows how chemistry underpins synthetic biology. The book is an essential guide to this fascinating new field, and will find a place on the bookshelves of researchers and students working in synthetic chemistry, synthetic and molecular biology, bioengineering, systems biology, computational genomics, and bioinformatics.

Peptide-based Drug Discovery - Ved Srivastava 2017-06-26

With potentially high specificity and low toxicity, biologicals offer promising alternatives to small-molecule drugs. Peptide therapeutics have again become the focus of innovative drug development efforts backed up by a resurgence of venture funds and small biotechnology companies. What does it take to develop a peptide-based medicine? What are the key challenges and how are they overcome? What are emerging therapeutics for peptide modalities? This book answers these questions with a holistic story from molecules to medicine, combining the themes of design, synthesis and clinical applications of peptide-based therapeutics and biomarkers. Chapters are written and edited by leaders in the field from industry and academia and they cover the pharmacokinetics of peptide therapeutics, attributes necessary for commercially successful metabolic peptides, medicinal chemistry strategies for the design of peptidase-resistant peptide analogues, disease classes for which peptide therapeutic are most relevant, and regulatory issues and guidelines. The critical themes covered provide essential background information on what it takes to develop peptide-based medicine from a chemistry perspective and views on the future of peptide drugs. This book will be a valuable resource not only as a reference book for the researcher engaged in academic and pharmaceutical setting, from basic research to manufacturing and from organic chemistry to biotechnology, but also a valuable resource to graduate students to understand discovery and development process for peptide-based medicine.

Peptide-based Drug Design - Michael D. Taylor 1995-04-13

Provides a framework for designing peptide-based therapeutic agents with improved transport and metabolism properties for optimal in vivo activity. Covers recent advances in molecular biology of transporters as well as what is more classically known about drug metabolism and drug transport of amino acids and peptides. Focuses on intestinal peptide transport, liver peptide transport, peptide delivery to the brain, peptide transport in microorganisms, and approaches to limiting peptide metabolism. Reviews the state of knowledge in the field and provides examples of how knowledge of peptide transport was used to design strategies for improved delivery of specific classes of agents. Details experimental systems that can be used to evaluate transport and metabolism of peptide-based drugs.

Drug Discovery - Hany El-Shemy 2013-01-23

Natural products are a constant source of potentially active compounds for the treatment of various disorders. The Middle East and tropical regions are believed to have the richest supplies of natural products in the world. Plant derived secondary metabolites have been used by humans to treat acute infections, health disorders and chronic illness for tens of thousands of years. Only during the last 100 years have natural products been largely replaced by synthetic drugs. Estimates of 200 000 natural products in plant species have been revised upward as mass spectrometry techniques have developed. For developing countries the identification and use of endogenous medicinal plants as cures against cancers has become attractive. Books on drug discovery will play vital role in the new era of disease treatment using natural products.

Protein Design - Raphael Guerois 2008-02-04

Protein Design: Methods and Applications presents the most up-to-date protein design and engineering strategies so that readers can undertake their own projects with a maximum chance of success. The authors present integrated computational approaches that require various degrees of computational complexity, and the major accomplishments that have been achieved in the design and structural characterization of helical peptides and proteins.

Neuroprotection - Matilde Otero-Losada 2020-11-26

Neurological disease affects nearly 25%–30% of the world’s population, exerting enormous financial strain on the healthcare system. Estimated current costs are around $800 annual billion, and this number is expected to increase exponentially as the global population ages. As such, new and alternative neuroprotective strategies are urgently needed. This book examines some of the most promising approaches in neuroprotection as well as discusses current goals and prospects. Organized into three sections, chapters cover such topics as the use of cannabinoids, medicinal plants, and essential oils in Alzheimer’s and Parkinson’s; protein misfolding and the neuroprotective potential of vitamin E in cerebral ischemia; and potential new neurological treatments and their mechanisms of action.

Introduction to Peptide Science - Ian W. Hamley 2020-06-08

Provides an interdisciplinary introduction to peptide science, covering their properties and synthesis, as well as many contemporary applications Peptides are biomolecules comprised of amino acids which play an important role in modulating many physiological processes in our body. This book presents an interdisciplinary approach and general introduction to peptide science, covering contemporary topics including their applicability in therapeutics, peptide hormones, amyloid structures, self-assembled structures, hydrogels, and peptide conjugates including lipopeptides and polymer-peptide conjugates. In addition, it discusses basic properties and synthesis clearly and concisely. Taking a logical approach to the subject, Introduction to Peptide Science gives readers the fundamental knowledge that is required to understand the cutting-edge material which comes later in the book. It offers readers in-depth chapter coverage of the basic properties of peptides; synthesis; amyloid and peptide aggregate structures; antimicrobial peptides and cell-penetrating peptides; and peptide therapeutics and peptide hormones. Introduces readers to peptide science, including synthesis and properties Provides unique content covering properties, synthesis, self-assembly, aggregation, and applications Summarizes contemporary topics in an accessible fashion including applications in therapeutics, peptide hormones, amyloid structures, self-assembled structures, hydrogels, and peptide conjugates including lipopeptides Presented at an introductory level for the benefit of students and researchers who are new to the subject Introduction to Peptide Science is an ideal text for undergraduate students of chemistry, biochemistry, and other related biological subjects, and will be a valuable resource for postgraduate students and researchers involved in peptide science and its applications.

Issues in Pharmacology, Pharmacy, Drug Research, and Drug Innovation: 2011 Edition - 2012-01-09

Issues in Pharmacology, Pharmacy, Drug Research, and Drug Innovation: 2011 Edition is a ScholarlyEditions™ eBook that delivers timely, authoritative, and comprehensive information about Pharmacology, Pharmacy, Drug Research, and Drug Innovation. The editors have built Issues in Pharmacology, Pharmacy, Drug Research, and Drug Innovation: 2011 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Pharmacology, Pharmacy, Drug Research, and Drug Innovation in this eBook to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Issues in Pharmacology, Pharmacy, Drug Research, and Drug Innovation: 2011 Edition has been produced by the world’s leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at http://www.ScholarlyEditions.com/.

Solid-Phase Synthesis - Fernando Albericio 2000-04-28

This volume provides the information needed to synthesize peptides by solid-phase synthesis (SPS) - employing polymeric support (resins), anchoring linkages (handles), coupling reagents (activators), and protection schemes. It presents strategies for creating a wide variety of compounds for drug discovery and

analyzes peptides, DNA, carbohydrates, conjugates of biomolecules, and small molecules.
Epigenetic Drug Discovery - Wolfgang Sippl 2019-03-25
This broad view of epigenetic approaches in drug discovery combines methods and strategies with individual targets, including new and largely unexplored ones such as sirtuins and methyl-lysine reader proteins. Presented in three parts - Introduction to Epigenetics, General Aspects and Methodologies, and Epigenetic Target Classes - it covers everything any drug researcher would need in order to know about targeting epigenetic mechanisms of disease. Epigenetic Drug Discovery is an important resource for medicinal chemists, pharmaceutical researchers, biochemists, molecular biologists, and molecular geneticists.