Textbook Of Medicinal Chemistry Vol I

Chemokine Receptors as Drug TargetsPrinciples of Medicinal Chemistry Volume-INew Trends in Synthetic Medicinal ChemistryQuantum Medicinal ChemistryStudies in Natural Products ChemistryComprehensive Medicinal ChemistryThe Organic Chemistry of Drug Design and Drug ActionMolecular Biology in Medicinal ChemistryFundamentals of Medicinal Chemistry and Drug MetabolismHit and Lead ProfilingMedicinal Chemistry of Anticancer DrugsAntisense Drug TechnologyPlatform Technologies in Drug Discovery and ValidationDrug BioavailabilityThe Organic Chemistry of SugarsTextbook Medicinal ChemistryMedicinal Natural Products: A Disease-Focused ApproachPharmaceutical Chemistry-- InorganicChemometric Methods in Molecular DesignBurger's Medicinal Chemistry, Drug Discovery, and Development, 8 Volume SetTextbook of Medicinal Chemistry Vol I - E-BookTextbook Of Medicinal ChemistryComprehensive Medicinal Chemistry II, Volume 1Comprehensive Medicinal Chemistry IITextbook of Medicinal ChemistryHandbook of Modern Pharmaceutical AnalysisTextbook of Medicinal Chemistry Vol II - E-BookPharmaceutical ChemistryEthnomedicine and Drug DiscoveryComprehensive Medicinal Chemistry: General principlesSun Protection in ManModern NMR Techniques for Chemistry ResearchPRINCIPLES OF MEDICINAL CHEMISTRY Vol. - IIDrug Design and ActionProgress in Medicinal ChemistryChemistry and Pharmacology of Anticancer DrugsPharmacophores and Pharmacophore SearchesPharmaceutical Chemistry-- OrganicBasic Concepts in Medicinal ChemistryMedicinal Chemistry

Chemokine Receptors as Drug Targets

The long-awaited volume on synthetic chemistry in the series "Methods and Principles in Medicinal Chemistry" is now available. In the pharmaceutical industry, computational methods play a major role in the discovery and development of new drugs. Yet, the SYNTHESIS of these compounds still remains the most crucial topic in drug design. Written by an internationally renowned team of authors and editors from academia and industry, this volume describes all recent developments in organic synthetic methodology which are essential for pharmaceutical research. The most modern synthetic developments of pharmacologically interesting compounds (carbohydrates and nucleotides) as well as important synthetic methods such as combinatorial chemistry, solid-phase reactions, bioassisted organic synthesis and asymmetric synthesis are critically discussed. Special emphasis is given to a hands-on practical approach which enables researchers to apply the featured methods immediately to their specific problems. Also, the detailed presentation of the topic and the selection of references will be of help to any researcher working in the laboratory.

Principles of Medicinal Chemistry Volume-I

The only reference on current methods to generate pharmacokinetic and safety profiles of drug candidates, as well as how they must be balanced against one other for the best selection of candidates for further development. Following a brief introduction to the necessities of filtering and risk assessment of potential new drug molecules before actual drug development, the two equally important aspects

of pharmacological (ADME) and safety (toxicity) profiling are covered in separate parts. The ADME section covers the profiling of basic physicochemical parameters, such as solubility and permeability, as well as more complex traits, such as the likelihood of drug-drug interactions, metabolic clearance and protein binding properties. The toxicology part addresses, among others, recent advances in early genetic toxicity testing, bioactivation screening, organ-specific toxicity assays for liver, heart, kidney and blood, as well as profiling for autoimmune reactions. By addressing both drug efficiency and drug safety, this modern practical reference shows readers how each individual aspect figures in shaping the key decisions on which the entire drug development process hinges. In short, this is a complete toolbox for assessing the risk/benefit ratio for any novel compound during the early drug development stages, using both in vitro and in silico methods. Both editors are based at one of the leading research-driven pharmaceutical companies, and the authors have been recruited from numerous other global players in the field. Invaluable know-how for every medicinal chemist and drug developer.

New Trends in Synthetic Medicinal Chemistry

Chemokines are hormone-like signaling molecules secreted by cells to signal infection and guide the immune response. Following a decade of basic chemokine research, the pharmaceutical industry has now begun to exploit this crucial signaling pathway for the development of innovative drugs against AIDS, cancer, neural and autoimmune diseases. Here is the first reference focusing on these novel drug development opportunities. Opening with a general introduction on chemokine function and chemokine receptor biology, the second part covers the known implications of these signaling molecules in human diseases, such as cancer, neural disorders, and viral infection, including AIDS. The third part systematically surveys current drug development efforts at targeting individual chemokine receptors, as well as other chemokine interaction partners, including up-to-date reports from the pharmaceutical industry.

Quantum Medicinal Chemistry

Natural products play an integral and ongoing role in promoting numerous aspects of scientific advancement, and many aspects of basic research programs are intimately related to natural products. With articles written by leading authorities in their respective fields of research, Studies in Natural Products Chemistry, Volume 37 presents current frontiers and future guidelines for research based on important discoveries made in the field of bioactive natural products. It is a valuable source for researchers and engineers working in natural products and medicinal chemistry. Describes the chemistry of bioactive natural products Contains contributions by leading authorities in the field A valuable source for researchers and engineers working in natural product and medicinal chemistry

Studies in Natural Products Chemistry

Medicinal chemistry is a complex topic. Written in an easy to follow and conversational style, Basic Concepts in Medicinal Chemistry focuses on the fundamental concepts that govern the discipline of medicinal chemistry as well as

how and why these concepts are essential to therapeutic decisions. The book emphasizes functional group analysis and the basics of drug structure evaluation. In a systematic fashion, learn how to identify and evaluate the functional groups that comprise the structure of a drug molecule and their influences on solubility, absorption, acid/base character, binding interactions, and stereochemical orientation. Relevant Phase I and Phase II metabolic transformations are also discussed for each functional group. Key features include: • Discussions on the roles and characteristics of organic functional groups, including the identification of acidic and basic functional groups. • How to solve problems involving pH, pKa, and ionization; salts and solubility; drug binding interactions; stereochemistry; and drug metabolism. • Numerous examples and expanded discussions for complex concepts. • Therapeutic examples that link the importance of medicinal chemistry to pharmacy and healthcare practice. • An overview of structure activity relationships (SARs) and concepts that govern drug design. • Review questions and practice problems at the end of each chapter that allow readers to test their understanding, with the answers provided in an appendix. Whether you are just starting your education toward a career in a healthcare field or need to brush up on your organic chemistry concepts, this book is here to help you navigate medicinal chemistry. About the Authors Marc W. Harrold, BS, Pharm, PhD, is Professor of Medicinal Chemistry at the Mylan School of Pharmacy, Duquesne University, Pittsburgh, PA. Professor Harrold is the 2011 winner of the Omicron Delta Kappa "Teacher of the Year" award at Duquesne University. He is also the two-time winner of the "TOPS" (Teacher of the Pharmacy School) award at the Mylan School of Pharmacy. Robin M. Zavod, PhD, is Associate Professor for Pharmaceutical Sciences at the Chicago College of Pharmacy, Midwestern University, Downers Grove, IL, where she was awarded the 2012 Outstanding Faculty of the Year award. Professor Zavod also serves on the adjunct faculty for Elmhurst College and the Illinois Institute of Technology. She currently serves as Editor-in-Chief of the journal Currents in Pharmacy Teaching and Learning.

Comprehensive Medicinal Chemistry

1.General Principles2. Topical Anti-Infective Agents3.Chemotherapy of Parasitic Diseases 4.Sulphonamides and Urinary Tract Antiseptic gents 5.Antibiotics 6.Modes of Action of Antibiotics 7.Antifungal Agents 8.Antiviral Agents 9.Anti-Neoplastic Agents 10.Anti-Tuberculosis and Anti-Leprotic Agents 11.Hormones 12.Insulin and Oral Hypoglycemic Agents 13.Diuretics 14.Drugs Acting on Blood 15.Drugs Acting on GIT 16.Drugs Acting on Respiratory Tract 17.Diagnostic Agents 18.Immuno-Modulators 19.Adverse Effects 20.Quantitative Structure Activity Relationship 21.Vitamins Synthesis of Drugs (Appendix) Index

The Organic Chemistry of Drug Design and Drug Action

Molecular Biology in Medicinal Chemistry

"Sun Protection in Man" looks at the beneficial and harmful effects of solar radiation. The physiological consequences of sun exposure have been systematically studied starting at the end of the nineteenth century and we now

have accumulated knowledge about how Caucasian and Asian skins reacts to solar radiation. The chemical effects of solar ultraviolet radiation have been analyzed with particular emphasis during the second half of the twentieth century. Research on micro-organisms has allowed us to understand the mechanisms of UV-induced mutagenesis and photosensitization. Studies with laboratory rodents have opened the path to the understanding of UV-induced immune-depression, carcinogenesis, photo-damage and photo-aging. The results of these studies have enabled other scientists to investigate the same phenomena in human organs such as the skin and the eye. UV radiation damages hair, as well. The present knowledge in these fields is summarized in some of the chapters of this monograph. Mass phenomenon in Europe with the generalization of summer vacations which were a consequence of social reforms introducing the concept of "paid vacations". This created a need for protection and opened a market for sunscreens. This monograph is concerned with sun protection as a whole and is not just "another book on sunscreens". Nonetheless, in these days of general concern, it is important to learn about the efficiency of sunscreens. Several authors discuss how to reduce the number of impinging photons and explain why sunscreens seem to offer less protection than expected. Guidelines are given on how to use sunscreens in everyday life, which are expressed rigorously though clearly, for access to the common reader. Our knowledge on the relationship between sun and humans is at the early stages of development. Industrial and commercial activities are concerned by the development of this knowledge, and rules have been and will be promulgated to guarantee efficacy and safety of sun-products. It is hoped that this monograph will be of interest to the scholar, the layman and the legislator.

Fundamentals of Medicinal Chemistry and Drug Metabolism

This volume provides and educative and authoriative discussions on the drug discovery and development process. It is divided into ten sections and starts with personal recollections on the history and evolution of the drug discovery process. To illustrate the end result of the drug discovery process, a large chapter reviews the major drug introductions over 1993-2003. Subsequent chapters examine the impact of genomic technologies, new sources of drugs and alternatives to animal testing. The next section reviews the roles of enterprise and pharamaceuticals companies, venture capitalists and academic-industrial relations in the drug discovery process. Social and ethical issues are reviewed in the context of assessing health demands in developed, developing countries and also in relation to smaller scale diseases (orphan drugs). Two chapters then review the bioethical and ethical issues facing the pharmaceutical industry. The volume concludes with reviews on funding and regulartion and how intellectual property rights and patents are protected. With such a wide variety of topics this volume will appeal to both scientists and non-scientists who need to understand how and why the pharmaceutical industry works. * valuable content available from May 2009 as an individual volume * provides a global overview of the drug discovery process

Hit and Lead Profiling

Medicinal Natural Products: A Disease-Focused Approach, Volume 55 in the Annual Reports in Medicinal Chemistry series, highlights the applications of natural products as medicines or prospective medicinal leads for the treatment of various

human ailments. Each chapter covers a particular disease area or medical condition, with chapters in this new release covering Medicinal Natural Products – An Introduction, Anticancer Natural Products, Antimicrobial Natural Products, Antimalarial and Antiparasitic Natural Products, Anti-inflammatory Natural Products, Neuroprotective Natural Products, Hepatoprotective Natural Products, Nephroprotective Natural Products, Cancer Chemopreventive Natural Products, Antipsoriatic Natural Products, Medicinal Natural Products in Osteoporosis, Antidiabetic Natural Products, Anti-obesity Natural Products, and much more. Presents a disease-focused perspective Includes the latest on the medicinal chemistry of natural products Covers natural products in drug delivery

Medicinal Chemistry of Anticancer Drugs

Antisense Drug Technology

The peroral application (swallowing) of a medicine means that the body must first resorb the active substance before it can begin to take effect. The efficacy of drug uptake depends on the one hand on the chemical characteristics of the active substance, above all on its solubility and membrane permeability. On the other hand, it is determined by the organism's ability to absorb pharmaceuticals by way of specific transport proteins or to excrete them. Since many pharmacologically active substances are poorly suited for oral intake, a decisive criterion for the efficacy of a medicine is its so-called bioavailability. Written by an international team from academia and the pharmaceutical industry, this book covers all aspects of the oral bioavailability of medicines. The focus is placed on methods for determining the parameters relevant to bioavailability. These range from modern physicochemical techniques via biological studies in vitro and in vivo right up to computer-aided predictions. The authors specifically address possibilities for optimizing bioavailability during the early screening stage for the active substance. Its clear structure and comprehensive coverage make this book equally suitable for researchers and lecturers in industry and teaching.

Platform Technologies in Drug Discovery and Validation

The Textbook of Medicinal Chemistry is a much-awaited masterpiece in its arena. Targeted mainly to B. Pharmacy students, book would also be useful for M. Pharmacy as well as M.Sc. Organic Chemistry/Pharmaceutical Chemistry students. It aims at eliminating the inadequacies in teaching and learning of medicinal chemistry by providing enormous information on all the topics in medicinal chemistry of synthetic drugs. About the Author : - Prof. Dr. V. Alagarsamy, M. Pharm., Ph.D., FIC., D.O.M.H., is Professor and Principal of MNR College of Pharmacy, Gr. Hyderabad, Sangareddy. He has been teaching Medicinal Chemistry and performing research work in Synthetic Medicinal Chemistry on novel heterocyclic bioactive compounds for more than a decade. His research activities are collaborated with various research laboratories/organisations like National Cancer Institute, USA; Rega Institute for Medical Research, Belgium and Southern Research Institute, USA. He is a recipient of Young Scientist award from the Department of Science and Technology, New Delhi. His research publications in

journals and presentations in conferences, put together, exceed hundred. His research activities are supported by the funding agencies like CSIR, DST and DSIR. He is a doctoral committee member and recognized Research guide for Ph.D. students in various universities.

Drug Bioavailability

Presents an introduction to modern NMR methods at a level suited to organic and inorganic chemists engaged in the solution of structural and mechanistic problems. The book assumes familiarity only with the simple use of proton and carbon spectra as sources of structural information and describes the advantages of pulse and Fourier transform spectroscopy which form the basis of all modern NMR experiments. Discussion of key experiments is illustrated by numerous examples of the solutions to real problems. The emphasis throughout is on the practical side of NMR and the book will be of great use to chemists engaged in both academic and industrial research who wish to realise the full possibilities of the new wave NMR.

The Organic Chemistry of Sugars

Extensively revised and updated, Antisense Drug Technology: Principles, Strategies, and Applications, Second Edition reflects the logarithmic progress made in the past four years of oligonucleotide-based therapies, and, in particular, antisense therapeutics and research. Interpreting lessons learned from the clinical trials of first generati

Textbook Medicinal Chemistry

Medicinal Natural Products: A Disease-Focused Approach

V. 1. General principles / volume editor, Peter D. Kennewell.--v. 2. Enzymes & other molecular targets / volume editor, Peter G. Sammes.--v. 3. Membranes & receptors / volume editor, John C. Emmett.--v. 4. Quantitative drug design / volume editor, Christopher A. Ramsden.--v. 5. Biopharmaceutics / volume editor, John B. Taylor.--v. 6. Cumulative subject index & drug compendium / volume editor, Colin J. Drayton.

Pharmaceutical Chemistry-- Inorganic

Platform Technologies in Drug Discovery and Validation, Volume 50, the latest release in the Annual Reports in Medicinal Chemistry series, provides timely and critical reviews of important topics in medicinal chemistry, with an emphasis on emerging topics in the biological sciences. Topics covered in this new volume include DELT, Oligos: ASO, siRNA, CRISPR, Micro-fluidic chemistry, High throughput screening, Kinase-centric computational drug development, Virtual Screening, Phenotypic screening, PROTACS, Chemical Biology, Fragment-based lead generation, Antibody-Drug Conjugates, Antibody-recruiting small molecules, Deuteration, and Peptides. Unique for its treatment of platform technologies for medicinal chemistry and target validation Provides a single, rich volume that

summaries a broad spectrum of expertise relevant to the field Presents state-of-the-art summaries of platform technologies

Chemometric Methods in Molecular Design

Intrigued as much by its complex nature as by its outsider status in traditional organic chemistry, the editors of The Organic Chemistry of Sugars compile a groundbreaking resource in carbohydrate chemistry that illustrates the ease at which sugars can be manipulated in a variety of organic reactions. Each chapter contains numerous examples demonst

Burger's Medicinal Chemistry, Drug Discovery, and Development, 8 Volume Set

This popular textbook for pharmacy students provides all the information they need to know about medicinal chemistry. The third edition features new layout and design in an attractive two-colour presentation. It contains clear classifications, synthetic schemes, modes of action, metabolism, assay, pharmacological uses with the dose and structure activity relationship (SAR) of the drugs for the various body systems. - Contains a complete section on drug design, describing the new drug development. - Includes an introduction to the physiological and pathophysiological conditions of diseases and their treatment. - Provides well-illustrated synthetic schemes and alternative synthetic routes for the majority of drugs. - Additional physico-chemical parameters have been explained.

Textbook of Medicinal Chemistry Vol I - E-Book

Medicinal Chemistry of Anticancer Drugs, Second Edition, provides an updated treatment from the point of view of medicinal chemistry and drug design, focusing on the mechanism of action of antitumor drugs from the molecular level, and on the relationship between chemical structure and chemical and biochemical reactivity of antitumor agents. Antitumor chemotherapy is a very active field of research, and a huge amount of information on the topic is generated every year. Cytotoxic chemotherapy is gradually being supplemented by a new generation of drugs that recognize specific targets on the surface or inside cancer cells, and resistance to antitumor drugs continues to be investigated. While these therapies are in their infancy, they hold promise of more effective therapies with fewer side effects. Although many books are available that deal with clinical aspects of cancer chemotherapy, this book provides a sorely needed update from the point of view of medicinal chemistry and drug design. Presents information in a clear and concise way using a large number of figures Historical background provides insights on how the process of drug discovery in the anticancer field has evolved Extensive references to primary literature

Textbook Of Medicinal Chemistry

This two volume book is an excellent introduction to this interdisciplinary area, lying on the interface between organic chemistry, biochemistry and medicine. The authors give a comprehensive overview of the field and outline the actual

challenges in pharmaceutical science and industry. Volume 1 introduces the concepts of drug design and drug metabolic processes as well as antibacterial, antiviral and anticancer agents.

Comprehensive Medicinal Chemistry II, Volume 1

This handbook is the first to address the practical aspects of this novel method. It provides a complete overview of the field and progresses from general considerations to real life scenarios in drug discovery research. Starting with an introductory historical overview, the authors move on to discuss ligand-based approaches, including 3D pharmacophores and 4D QSAR, as well as the concept and application of pseudoreceptors. The next section on structure-based approaches includes pharmcophores from ligand-protein complexes, FLIP and 3D protein-ligand binding interactions. The whole is rounded off with a complete section devoted to applications and examples, including modeling of ADME properties. With its critical evaluation of pharmacophore-based strategies, this book represents a valuable aid for project leaders and decision-makers in the pharmaceutical industry, as well as pharmacologists, and medicinal and chemists.

Comprehensive Medicinal Chemistry II

Computational methods are transforming the work of chemical and pharmaceutical laboratories. Increasingly faster and more exact simulation algorithms have made quantum chemistry a valuable tool in the search for active substances. Written by a team of leading international quantum chemists, this book is aimed at both beginners as well as experienced users of quantum chemical methods. All commonly used quantum chemical methods are treated here, including Density Functional Theory, quantum and molecular mechanical approaches. Numerous examples illustrate the use of these methods for dealing with problems in pharmaceutical practice, whether the study of inhibitor binding, identifying the surface load of active substances or deriving molecular descriptors using quantum chemical tools. For anyone striving to stay ahead in this rapidly evolving field.

Textbook of Medicinal Chemistry

Dr Alagarsamy's Textbook of Medicinal Chemistry is a much-awaited masterpiece in its arena. Targeted mainly to B. Pharm. students, this book will also be useful for M. Pharm. as well as M. Sc. organic chemistry and pharmaceutical chemistry students. It aims at eliminating the inadequacies in teaching and learning of medicinal chemistry by providing enormous information on all the topics in medicinal chemistry of synthetic drugs. Salient Features Contains clear classification, synthetic schemes, mode of action, metabolism, assay, pharmacological uses with the dose and structure–activity relationship (SAR) of the following classes of drugs: Drugs acting on inflammation Drugs acting on respiratory system Drugs acting on digestive system Drugs acting on blood and blood-forming organs Drugs acting on endocrine system Contains a complete section on chemotherapy and the various classes of chemotherapeutic agents. Also includes recent topics like anti-HIV agents Contains brief introduction about the physiological and pathophysiological conditions of diseases and their treatment

under each topic Provides well-illustrated synthetic schemes and alternative synthetic routes for majority of drugs that help in quick and enhanced understanding of the subject Covers the syllabi of majority of Indian universities

Handbook of Modern Pharmaceutical Analysis

The emergence of new infectious, chronic and drug resistant diseases have prompted scientists to look towards medicinal plants as agents for treatment and prevention. This book provides an interphase between ethnomedical and ethnobotanical approaches to new drug discovery and advances in biotechnology and molecular science that has made it increasingly feasible to transform traditional medicines into modern drugs. These novel approaches also raise new issues and the volume explores economic, ethical and policy considerations of drug development based on indigenous knowledge or traditional medicine. This work also features standardization and development of phytomedicines for major therapeutic indications, including emerging infectious diseases affecting developing and developed countries. The publication provides state-of-the-art information on the most innovative science, the research, the industry, the market, and the future of ethnomedicine and drug discovery.

Textbook of Medicinal Chemistry Vol II - E-Book

The statistical analysis of experimental and theoretical data lies at the heart of modern drug design. This practice-oriented handbook is a comprehensive account of modern chemometric methods in molecular design. It presents strategies for making more rational choices in the planning of syntheses, and describes techniques for analyzing biological and chemical data. Written by the world's experts, it provides in-depth information on * molecular concepts * experimental design in the planning of syntheses * multivariate analysis of chemical and biological data * statistical validation of QSAR results An additional benefit: the book contains a critical survey of commercially available software packages both for statistical analysis as well as for special applications. Industrial and academic researches in medicinal chemistry and organic chemistry will value this book as a useful source of information for their daily work. Also available: Advanced Computer-Assisted Techniques in Drug Discovery, edited by H. van de Waterbeemd

Pharmaceutical Chemistry

The first edition of Comprehensive Medicinal Chemistry was published in 1990 and very well received. Comprehensive Medicinal Chemistry II is much more than a simple updating of the contents of the first edition. Completely revised and expanded, this new edition has been refocused to reflect the significant developments and changes over the past decade in genomics, proteomics, bioinformatics, combinatorial chemistry, high-throughput screening and pharmacology, and more. The content comprises the most up-to-date, authoritative and comprehensive reference text on contemporary medicinal chemistry and drug research, covering major therapeutic classes and targets, research strategy and organisation, high-throughput technologies, computer-

assisted design, ADME and selected case histories. It is this coverage of the strategy, technologies, principles and applications of medicinal chemistry in a single work that will make Comprehensive Medicinal Chemistry II a unique work of reference and a single point of entry to the literature for pharmaceutical and biotechnology scientists of all disciplines and for many industry executives as well.Comprehensive Medicinal Chemistry II will be available online in 2007 via the proven platform ScienceDirect providing the user with enhanced features such as cross-referencing and dynamic linking. * Comprehensively reviews - for the first time in one single work - the strategies, technologies, principles and applications of modern medicinal chemistry * Provides a global and current perspective of today's drug discovery process and discusses the major therapeutic classes and targets * Includes a unique collection of case studies and personal assays reviewing the discovery and development of key drugs

Ethnomedicine and Drug Discovery

Medicinal Chemistry: Fundaments presents the cycle of the life of drugs, their physico-chemical properties, and consequences that arise in development. The fundamental concepts of Medicinal Chemistry (pharmacophore, prodrugs, Lipinsky rules) are also presented, including discussions on specific concerns of the European Pharmacopeia – the industrialist’s bible – its role, and a description of the monographs of active principles. Defines the lifecycle of drugs Explains the physico-chemical properties and consequences of a drug Studies the fundamental concepts of medicinal chemistry Describes the active ingredient monographs

Comprehensive Medicinal Chemistry: General principles

The primary objective of this 4-volume book series is to educate PharmD students on the subject of medicinal chemistry. The book set serves as a reference guide to pharmacists on aspects of chemical basis of drug action. This first volume of the series is comprised of 8 chapters focusing on basic background information about medicinal chemistry. It takes a succinct and conceptual approach to introducing important fundamental concepts required for a clear understanding of various facets of pharmacotherapeutic agents, drug metabolism and important biosynthetic pathways that are relevant to drug action. Notable topics covered in this first volume include the scope and importance of medicinal chemistry in pharmacy education, a comprehensive discussion of the organic functional groups present in drugs, and information about four major types of biomolecules (proteins, carbohydrates, lipids, nucleic acids) and key heterocyclic ring systems. The concepts of acid-base chemistry and salt formation, and their applications to the drug action and design follow thereafter. These include concepts of solubility and lipid-water partition coefficient (LWPC), isosterism, stereochemical properties, mechanisms of drug action, drug receptor interactions critical for pharmacological responses of drugs, and much more. Students and teachers will be able to integrate the knowledge presented in the book and apply medicinal chemistry concepts to understand the pharmacodynamics and pharmacokinetics of therapeutic agents in the body.

Sun Protection in Man

While drug therapies developed in the last 50 years have markedly improved the management of some types of cancers, treatment outcomes, and drug side-effects for the most common types remain unacceptable. However, recent technological advances are leading to improved therapies based on targeting distinct biological pathways in cancer cells. Chemistry and Pharmacology of Anticancer Drugs is a comprehensive survey of all families of anticancer agents currently in use or in advanced stages of clinical trials, including biologicals. The book is unique in providing molecular structures for all anticancer drugs, discussing them in terms of history, chemistry, mechanism of action, structure-function relationships, and pharmacology. It also provides some relevant information on side effects, dosing, and formulation. The author, a renowned scientist in cancer research and drug development, also provides up-to-date information on the drug discovery process, including new research tools, tumor-targeting strategies, and fundamental concepts in the emerging areas of personalized medicine (e.g., oncogenomics) and chemoprevention. Chemistry and Pharmacology of Anticancer Drugsis an indispensable resource for cancer researchers, medicinal chemists, and other biomedical scientists involved in the development of new anticancer treatments. Its breadth of coverage also makes it suitable for undergraduate and postgraduate courses in medicine, pharmacy, nursing, and related disciplines.

Modern NMR Techniques for Chemistry Research

V. 1. General principles / volume editor, Peter D. Kennewell.--v. 2. Enzymes & other molecular targets / volume editor, Peter G. Sammes.--v. 3. Membranes & receptors / volume editor, John C. Emmett.--v. 4. Quantitative drug design / volume editor, Christopher A. Ramsden.--v. 5. Biopharmaceutics / volume editor, John B. Taylor.--v. 6. Cumulative subject index & drug compendium / volume editor, Colin J. Drayton.

PRINCIPLES OF MEDICINAL CHEMISTRY Vol. - II

Dr Alagarsamy's Textbook of Medicinal Chemistry is a much-awaited masterpiece in its arena. Targeted mainly to B. Pharm. students, this book will also be useful for M. Pharm. as well as M. Sc. organic chemistry and pharmaceutical chemistry students. It aims at eliminating the inadequacies in teaching and learning of medicinal chemistry by providing enormous information on all the topics in medicinal chemistry of synthetic drugs. Salient Features Contains clear classification, synthetic schemes, mode of action, metabolism, assay, pharmacological uses with the dose and structure-activity relationship (SAR) of the following classes of drugs: Drugs acting on inflammation Drugs acting on respiratory system Drugs acting on digestive system Drugs acting on blood and blood-forming organs Drugs acting on endocrine system Contains a complete section on chemotherapy and the various classes of chemotherapeutic agents. Also includes recent topics like anti-HIV agents Contains brief introduction about the physiological and pathophysiological conditions of diseases and their treatment under each topic Provides well-illustrated synthetic schemes and alternative synthetic routes for majority of drugs that help in quick and enhanced understanding of the subject Covers the syllabi of majority of Indian universities

Drug Design and Action

Dr Alagarsamy's Textbook of Medicinal Chemistry is a much-awaited masterpiece in its arena. Targeted mainly to B. Pharm. students, this book will also be useful for M. Pharm. as well as M. Sc. organic chemistry and pharmaceutical chemistry students. It aims at eliminating the inadequacies in teaching and learning of medicinal chemistry by providing enormous information on all the topics in medicinal chemistry of synthetic drugs. Salient Features Contains clear classification, synthetic schemes, mode of action, metabolism, assay, pharmacological uses with the dose and structure–activity relationship (SAR) of the following classes of drugs: Drugs acting on inflammation Drugs acting on respiratory system Drugs acting on digestive system Drugs acting on blood and blood-forming organs Drugs acting on endocrine system Contains a complete section on chemotherapy and the various classes of chemotherapeutic agents. Also includes recent topics like anti-HIV agents Contains brief introduction about the physiological and pathophysiological conditions of diseases and their treatment under each topic Provides well-illustrated synthetic schemes and alternative synthetic routes for majority of drugs that help in quick and enhanced understanding of the subject Covers the syllabi of majority of Indian universities

Progress in Medicinal Chemistry

This readily comprehensible book explains the identification of molecular targets via cellular assays, reporter genes or transgenic models, as well as surveying recent advances in the synthesis, separation and analysis of drugs. A special section is devoted to molecular genetics methods. With its examination of these novel methods and generous practical advice, this is essential reading for all pharmaceutical chemists, molecular biologists and medical researchers using molecular methods to study drugs and their action.

Chemistry and Pharmacology of Anticancer Drugs

This is a new approach to the teaching of medicinal chemistry. The knowledge of the physical organic chemical basis of drug design and drug action allows the reader to extrapolate to the many related classes of drugs described in standard medicinal chemistry texts. Students gain a solid foundation to base future research endeavors upon: drugs not yet developed are thus covered! n Emphasizes the use of the principles of physical organic chemistry as a basis for drug design n Discusses organic reaction mechanisms of clinically important drugs with mechanistic schemes n Uses figures and literature references extensively throughout n This text is not merely a "compilation of drugs and uses," but features selected drugs as examples of the organic chemical basis for any and all drug design applications

Pharmacophores and Pharmacophore Searches

Handbook of Modern Pharmaceutical Analysis, Second Edition, synthesizes the complex research and recent changes in the field, while covering the techniques and technology required for today's laboratories. The work integrates strategy,

case studies, methodologies, and implications of new regulatory structures, providing complete coverage of quality assurance from the point of discovery to the point of use. Treats pharmaceutical analysis (PA) as an integral partner to the drug development process rather than as a service to it Covers method development, validation, selection, testing, modeling, and simulation studies combined with advanced exploration of assays, impurity testing, biomolecules, and chiral separations Features detailed coverage of QA, ethics, and regulatory guidance (quality by design, good manufacturing practice), as well as high-tech methodologies and technologies from "lab-on-a-chip" to LC-MS, LC-NMR, and LC-NMR-MS

Pharmaceutical Chemistry-- Organic

The present text ?Pharmaceutical Chemistry ? Organic, Vol.II? has been thoroughly revised according to the revised syllabus framed by the Pharmacy Council of India. In this revised edition,the subject matter has been reorganised incorporating application-wise classification(therapeutic, pharmaceutical,etc.) rather than the traditional chemical classification. More stress has been in explaining the medicinal and pharmaceutical terms. Students will find repetition for some medicinal compounds which find more than one application.

Basic Concepts in Medicinal Chemistry

Now in its seventh edition, Burger's Medicinal Chemistry, Drug Discovery and Development provides an established, recognized, authoritative and comprehensive source on medicinal chemistry and drug discovery and development. This flagship reference for medicinal chemists and pharmaceutical professions has been thoroughly updated and expanded across 8 volumes to incorporate the entire process of drug development (preclinical testing, clinical trials, etc.) alongside the traditional strengths in medicinal chemistry and drug discovery.

Medicinal Chemistry

Progress in Medicinal Chemistry, Volume 59, provides a review of eclectic developments in medicinal G139 chemistry. Each chapter is written by an international board of authors, with this release focusing on Small Molecules - Giant Leaps for Immuno-Oncology, Reviewing P2X7, Reviewing ASK1, and Reviewing DNA-encoded libraries. Provides extended, timely reviews of topics in medicinal chemistry Contains targets and technologies relevant to the discovery of tomorrow’s drugs Presents analyses of successful drug discovery programs