DOWNLOAD PDF FUNDAMENTALS OF MEDICINAL CHEMISTRY

Chapter 1 : [PDF/ePub Download] fundamentals of medicinal chemistry eBook

Fundamentals of Medicinal Chemistry is a conciseintroduction to the chemistry of therapeutically active compounds,written in a readable and accessible style. Starting with a reviewof the structures and nomenclature of the more common classes ofnaturally occurring compounds found in biological organisms, thetext then covers the discovery and.

The primary objective of this e-Book series is to educate Pharm-D students in the area of medicinal chemistry and serve as a reference guide to pharmacists on the aspects of chemical basis of drug action. A thorough discussion of key physicochemical parameters of therapeutic agents and how they affect the biochemical, pharmacological, and pharmacokinetic processes and clinical use of these agents is the primary focus of the whole book. The rationale for putting together an e-Book of this nature is to equip Pharm-D students with the scientific basis to competently evaluate, recommend and counsel patients and health care professionals regarding the safe, appropriate, and cost-effective use of medications. It takes a succinct and conceptual approach to introduce important fundamental chemical concepts, required for a clear understanding of various facets of pharmacotherapeutic agents, drug metabolism and important biosynthetic pathways that are relevant to drug action. Chapter 1 is designed to ensure that the students learn about the scope and importance of medicinal chemistry, in addition to some important definitions. This chapter is an introduction to the overall role of a pharmacist and to the significance of medicinal chemistry in pharmacy education. It discusses the role of the pharmacist, history of medicinal chemistry and intellectual domains of medicinal chemistry. Chapter 2 includes a comprehensive discussion of the four major biomolecules: Organic functional groups present in drugs, and biomolecules are reviewed in this chapter. Additionally, heterocycles present in drugs and biomolecules are reviewed in this chapter. It also highlights the significance of salt formation in pharmaceutical products, factors that determine ionization, and acid-base strengths. The application of acid-conjugate base, base-conjugate acid and Henderson-Hasselbalch equation in pharmacy and drug action and bioavailability are also discussed. The interpretation of pH partition theory, its significance in drug pharmacokinetics, the purpose of salt formation with drug molecules and the acidity or basicity of the salts are illustrated in this chapter. Chapter 4 covers solubility and lipid-water partition coefficient LWPC concepts in detail with specific drug examples. Hydrophilicity, hydrophobicity and lipophilicity of drugs, and their effect on solubility are discussed to enable the readers to predict the water or lipid solubility of drugs based on their chemical composition. Additionally, the chapter includes a discussion of the effects of partition coefficient on drug bioavailability and action. Chapter 5 reviews the concepts of isosterism, stereochemical principles, and their application. Chapter 6 is a brief review of the mechanisms of drug action and discusses drug receptor interactions critical for pharmacological responses of drugs. This chapter also discusses the theories of drug action that include: Chapter 7 provides a detailed account of drug metabolism, prodrugs and related terminology. It provides a comprehensive account of the fundamental concepts of drug metabolism, describes the significance of drug metabolism, key enzymes involved in the sites of drug metabolism, phase I and phase II metabolic pathways that include oxidation reduction hydrolysis, glucuronic acid conjugation, sulfate conjugation, conjugations with glycine and other amino acids, glutathione or mercapturic acid, acetylation, and methylation. This chapter also defines and differentiates between prodrug, soft drug and antedrugs and discusses their clinical significance. Chapter 8 provides a brief review of biosynthetic pathways frequently targeted by pharmaceutical interventions. The biosynthetic pathways discussed in this chapter include: The chapters in this volume are designed to guide the reader to review, integrate and apply medicinal chemistry concepts to the study of therapeutic agents that are the focus of subsequent volumes. All concepts are illustrated with diagrams or figures, with the keywords highlighted, bulleted or numbered. Wherever needed, special boxes and case studies are included. In addition, each chapter is reinforced with practice problems and answer sets. Special notations are highlighted using call-out boxes for visual effect. Tables and figures are used to augment the text as needed. We would like to express our sincere gratitude to the contributing authors for their time and effort in completing this volume. We would also like to thank Bentham Science Publishers,

particularly Ms. Fariya Zulfiqar Assistant Manager Publications for their support. We are confident that this volume of the eBook series will guide students and educators of pharmacy and related health professions worldwide.

Chapter 2 : Book Review: Fundamentals of Medicinal Chemistry - Gareth Thomas

An overview of medicinal chemistry is followed by chapters covering the discovery and design of drugs, pharmacokinetics and drug metabolism, The book concludes with a chapter on organic synthesis, followed by a brief look at drug development from the research stage through to marketing the final product.

Chapter 3 : Fundamentals of Medicinal Chemistry and Drug Metabolism

Fundamentals of Medicinal Chemistry is a concise introduction to the chemistry of therapeutically active compounds, written in a readable and accessible style. Starting with a review of the structures and nomenclature of the more common classes of naturally occurring compounds found in biological.

Chapter 4 : fundamentals of medicinal chemistry | Download eBook pdf, epub, tuebl, mobi

Fundamentals of medicinal chemistry provides a concise introduction to the chemistry of therapeutically active compounds, written in a readable and accessible style. The title begins by reviewing the structures and nomenclature of the more common classes of naturally occurring compounds found in biological organisms.

Chapter 5 : Medicinal chemistry : fundamentals (eBook,) [blog.quintoapp.com]

Abstract: Principles of Medicinal Chemistry is an eminently readable textbook for beginning students of medicinal chemistry. It is not exhaustive, but it is "comprehensive enough to help students pass their courses in medicinal chemistry".

Chapter 6 : Fundamentals of Medicinal Chemistry by Gareth Thomas

Provides a concise introduction to the chemistry of therapeuticallyactive compounds, written in a readable and accessible style. The title begins by reviewing the structures and nomenclature ofthe more common classes of naturally occurring compounds found inbiological organisms. An overview of.

Chapter 7 : Fundamentals of Medicinal Chemistry: Medicine & Health Science Books @ blog.quintoapp.co

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Chapter 8 : Fundamentals of medicinal chemistry | ChemZone

Course Description. This is a foundation course whose aims are to provide an introduction to the principles of Medicinal chemistry, including an understanding of drug structure-activity relationships, prediction of the physico-chemical properties of a drug, basic knowledge of the major pathways of drug metabolism, and factors that can contribute to drug-drug interactions.

Chapter 9 : The Handbook of Medicinal Chemistry (RSC Publishing)

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.