Handbook Of Pharmaceutical Excipients 5th Edition

Volumes in this widely revered series present comprehensive reviews of drug substances and additional materials, with critical review chapters that summarize information related to the characterization of drug substances and excipients. This organizational structure meets the needs of the pharmaceutical community and allows for the development of a timely vehicle for publishing review materials on this topic. The scope of the Profiles series encompasses review articles and database compilations that fall within one of the following six broad categories: Physical profiles of drug substances and excipients; Analytical profiles of drug substances and excipients; Drug metabolism and pharmacokinetic profiles of drug substances and excipients; Methodology related to the characterization of drug substances and excipients; Methods of chemical synthesis; and Reviews of the uses and applications for individual drug substances, classes of drug substances, or excipients. Presents comprehensive reviews covering all aspects of drug development and formulation of drugs Profiles creatine monohydrate and fexofenadine hydrochloride, as well as five others Meets the information needs of the drug development community

This is the long-awaited third edition of the most comprehensive compilation of drug information resources available. A co-publication with the Medical Library Association, it draws on industry expert Bonnie Snow's 30+ years of experience with pharmaceutical information needs and applications. Snow reviews 400+ print and electronic resources.More than a bibliography, this readable guide brings together the best resources plus practical advice on everything from expert search techniques to core collections for libraries. Subject areas covered include: pharmaceutical technology; legal and regulatory issues world-wide; industrial pharmacy; market research; product guides and prescribing information in the global marketplace; drug interactions; drug effects on pregnancy, lactation, and reproduction; pharmacovigilance; and much, much more. Completely revised, reorganized, and updated, the third edition focuses on information sources not covered elsewhere. Absolutely unique in its value as both a desk reference and a text for classroom use or self-study, this edition manages to meet the needs of students, information professionals, health care providers, and pharmacy practitioners.

Natural polymers have been utilized extensively in food, pharmaceuticals, cosmetics, textiles, oil drilling and paint industries. Their non-toxic and inexpensive attributes readily enhance their commercial acceptability and make them potent agents in lieu of synthetic polymers. This book explores the opportunistic utility of natural polymers in developing effective drug delivery systems and provides a comprehensive and up-to-date analysis of their source, chemical structure and mechanism of action. Covering novel polymers for drug delivery - in particular extracts from plants, microorganisms and proteins, as well as water soluble and water insoluble biodegradable polymers - it presents an encyclopaedic overview of natural polymers'. Natural Polymers for Drug Delivery is an invaluable resource for researchers, students and industrial scientists in the fields of biochemistry, chemistry, pharmacology and food science.

Until the 1990s, it was generally accepted that medicines were first developed for adults and their use in children was investigated later, if at all. One of the main tasks of hospital pharmacies was the manufacturing of child-appropriate formulations in a more

or less makeshift way. The first change came in 1997 with U.S. legislation that rewarded manufacturers to do voluntary pediatric research. Ten years later, the European Union passed legislation that required manufacturers to discuss all pediatric aspects, including formulations, with the regulatory authorities as a condition of starting the registration procedure. In consequence, manufacturers must now cover all age groups, including the youngest ones. So far, pediatric formulations were more a focus for academic researchers. Through the changed regulatory environment, there is now a sudden high commercial demand for age-appropriate formulations. This book begins by highlighting the anatomical, physiological and developmental differences between adults and children of different ages. It goes on to review the existing technologies and attempts to draw a roadmap to better, innovative formulations, in particular for oral administration. The regulatory, clinical, ethical and pharmaceutical framework is also addressed.

Thoroughly updated and expanded, this new Third Edition provides the latest information on dosage, forms, film defects, and polymer characterization. Written by renowned leaders in the field, Aqueous Polymeric Coatings for Pharmaceutical Dosage Forms is easily the most comprehensive book available on the market today. New to the Third Edition: the interaction of drugs with functional polymers the influence of processing parameters on coating quality the stabilization of polymeric film coats plasticizers and their applications in pharmaceutical coatings adhesion of polymeric films to solid substrates basic properties of latex and pseudolatex colloidal dispersions Key topics included: polymer interactions with drugs and excipients physical aging of polymeric films a complete overview and in-depth analysis of recent advances in the field, which includes information on the latest equipment used to apply polymers to a pharmaceutical system illustrated examples explaining the appropriate steps to be taken in order to solve formulation, processing, and stability problems to achieve an optimized dosage form

This first book on nanocellulose and nanohydrogels for biomedical applications is unique in discussing recent advancements in the field, resulting in a comprehensive, well-structured overview of nanocellulose and nanohydrogel materials based nanocomposites. The book covers different types of nanocellulose materials and their recent developments in the drug delivery and nanomedicine sector, along with synthesis, characterization, as well as applications in the biotechnological and biomedical fields. The book also covers the current status and future perspectives of bacterial cellulose and polyester hydrogel matrices, their preparation, characterization, and tissue engineering applications of water soluble hydrogel matrices obtained from biodegradable sources. In addition, the chitosan-based hydrogel and nanogel matrices, their involvement in the current biofabrication technologies, and influencing factors towards the biomedical sector of biosensors, biopharmaceuticals, tissue engineering appliances, implant materials, diagnostic probes and surgical aids are very well documented. Further, the history of cellulose-based and conducting polymer-based nanohydrogels, their classification, synthesis methods and applicability to different sectors, the challenges associated with their use, recent advances on the inhibitors of apoptosis proteins are also included. The recent developments and applications in the drug delivery sector gives an overview of facts about the nanofibrillated cellulose and copoly(amino acid) hydrogel matrices in the biotechnology and biomedicine field. This

book serves as an essential reference for researchers and academics in chemistry, pharmacy, microbiology, materials science and biomedical engineering.

Describes the chemical and physical properties of pharmaceutical excipients. Each monograph contains nonproprietary names, synonyms, chemical name and CAS registry number, empirical formula and molecular weight, structural formula, functional category, applications in pharmaceutical formulation or technology, description, pharmacopeial specifications, typical propertics, stability and storage conditions, incompatibilities, method of manufacture, safety, handling precautions, regulatory status, pharmacopeias, related substances, comments, specific references, general references, and authors.

There are unique challenges in the formulation, manufacture, analytical chemistry, and regulatory requirements of low-dose drugs. This book provides an overview of this specialized field and combines formulation, analytical, and regulatory aspects of low-dose development into a single reference book. It describes analytical methodologies like dissolution testing, solid state NMR, Raman microscopy, and LC-MS and presents manufacturing techniques such as granulation, compaction, and compression. Complete with case studies and a discussion of regulatory requirements, this is a core reference for pharmaceutical scientists, regulators, and graduate students.

The importance of emulsification techniques, their use in the production of nanoparticles for biomedical applications as well as application of rheological techniques for studying the interaction between the emulsion droplets is gathered in this reference work. Written by some of the top scientists within their respective fields, this book covers such topics as emulsions, nano-emulsions, nano-dispersions and novel techniques for their investigation. It also considers the fundamental approach in areas such as controlled release, drug delivery and various applications of nanotechnology.

Drug Safety Evaluation Second Edition Shayne Cox Gad The updated and expanded safety guide to all aspects of the drug development process Drug Safety Evaluation, Second Edition presents an all-inclusive, practical guide for those who are responsible for ensuring the safety of drugs and biologics for patients, for health care providers, for those involved in the manufacture of medicinal products, and for all those who need to understand how the safety of these products is evaluated. This Second Edition has been extensively revised and expanded to respond to the many changes in regulatory requirements as well as pharmaceutical and technological developments. Drawing upon more than twenty years of experience, author Shayne Gad explains the scientific and philosophical bases for evaluating specific concerns (e.g., cardiovascular safety, immunogenicity, carcinogenicity, development toxicity, etc.) to provide both understanding and guidance for approaching new problems. Individual chapters address not only the general cases for safety evaluation of small and large molecules, but also all the significant major sub-cases: imaging agents, dermal and inhalation route drugs, vaccines, and gene-therapy products. Among the wide variety of topics covered are: Acute toxicity testing in pharmaceutical safety evaluation Genotoxicity Safety assessment of inhalant drugs Immunotoxicology in pharmaceutical development Large animal studies Evaluation of human tolerance and safety in clinical trials More pertinent and practical than ever to the industry, Drug Safety Evaluation, Second Edition provides a road map for safety assessment as an integral part of the development of new drugs and therapeutics.

This book is a structured approach to designing a product and its associated manufacturing process. It shows pharmaceutical engineers and scientists involved in product and process development how to utilize QbD practices and applications effectively while complying with government regulations. Material includes discussion of how to utilize design space, models, process control methodology, and cumulative process knowledge to seek improvements in manufacturing, while maintaining and enhancing product performance. Edited by three renowned researchers in the field, this invaluable resource is an essential tool for all pharmaceutical professionals.

This book contains essential knowledge on the preparation, control, logistics, dispensing and use of medicines. It features chapters written by experienced pharmacists working in hospitals and academia throughout Europe, complete with practical examples as well as information on current EU-legislation. From prescription to production, from usage instructions to procurement and the impact of medicines on the environment, the book provides step-by-step coverage that will help a wide range of readers. It offers product knowledge for all pharmacists working directly with patients and it will enable them to make the appropriate medicine available, to store medicines properly, to adapt medicines if necessary and to dispense medicines with the appropriate information to inform patients and caregivers about product care and how to maintain their quality. This basic knowledge will also be of help to industrial pharmacists to remind and focus them on the application of the medicines manufactured. The basic and practical knowledge on the design, preparation and quality management of medicines can directly be applied by the pharmacists whose main duty is production in community and hospital pharmacies and industries. Undergraduate as well as graduate pharmacy students will find knowledge and backgrounds in a fully coherent way and fully supported with examples.

This new edition brings you up-to-date on the role of pharmaceutics and its future paradigms in the design of medicines. Contributions from over 30 international thought leaders cover the core disciplines of pharmaceutics and the impact of biotechnology, gene therapy, and cell therapy on current findings. Modern Pharmaceutics helps you stay current

Compaction of powder constituents—both active ingredient and excipients—is examined to ensure consistent and reproducible disintegration and dispersion profiles. Revised to reflect modern pharmaceutical compacting techniques, this second edition of Pharmaceutical Powder Compaction Technology guides pharmaceutical engineers, formulation scientists, and product development and quality assurance personnel through the compaction formulation process and application. This unique reference covers: The physical structure of pharmaceutical compacts Bonding phenomena that occur during powder compaction Compression mechanisms of pharmaceutical particles Theories and basic principles of powder compaction New topics include: Compaction data analysis techniques The migration of powder constituents into commercial manufacture Instrumentation for compaction Compaction functionality testing, which is likely to become a USP requirement Design space for compaction Metrics required for scalability in tablet compression Interactive compaction and preformulation database for commonly used excipients

Focusing on the application of physical pharmacy, drug design, and drug regulations as they relate to produce effective dosage forms for drug delivery, Integrated

Pharmaceutics provides a comprehensive picture of pharmaceutical product design, describing the science and art behind the concepts of dosage form development. Combining physical pharmacy, product design, and regulatory affairs issues in a single book, the authors address topics governing drug regulations of United States, European, and Japanese agencies and detail new regulatory guidelines, including quality by design, design space analysis, and blend sample uniformity.

This book presents the physical and technical foundation of the state of the art in applied scanning probe techniques. It constitutes a timely and comprehensive overview of SPM applications. The chapters in this volume relate to scanning probe microscopy techniques, characterization of various materials and structures and typical industrial applications, including topographic and dynamical surface studies of thin-film semiconductors, polymers, paper, ceramics, and magnetic and biological materials. The chapters are written by leading researchers and application scientists from all over the world and from various industries to provide a broader perspective.

The surface of an object is the first thing we see or touch. Nearly every article or object we encounter at home, in industry, land transportation, aerospace, or the medical field in some way uses an adhesive, a sealant, or a decorative coating. Adhesion science provides the technology and the know-how behind these applications. Recent Advances in Adhesion Science and Technology in Honor of Dr. Kash Mittal is dedicated to Dr. Mittal’s outstanding contributions to the global adhesion community and his achievements in disseminating the science of adhesion. This Festschrift volume contains selected papers from the Special Symposium on Recent Advances in Adhesion Science and Technology held in honor of Dr. Mittal to commemorate the publication of his 100th edited book. Written by world-renowned researchers, the papers have been updated for inclusion in this volume. They offer insight into recent developments and the significant ramifications to adhesion science and adhesive technology. Nineteen articles are divided into five sections: Interfaces, Wettability, and Adhesion; Surface Modification of Polymers; Adhesion Aspects of Bio-Based Materials and Bioadhesion; Adhesives and Their Testing; and Nanomaterials and Nanocomposites. Reflecting the multidisciplinary nature of adhesion science, the topics covered include metal–polymer interfaces and ways to improve adhesion, lateral force at liquid–solid interface, particle adhesion in pharmaceutical sciences, wood joints formed without use of adhesives, reinforced polymer composites using different fillers, "green" composites, medium density fiber board surfaces for powder coating, adhesion aspects in dentistry, E. coli interactions in porous media, analysis of adhesive behavior in bonded assemblies, soy proteins as wood adhesives, carbon nanotube-based interphase sensors, and reaction of multiwalled carbon nanotubes with gaseous atoms.

The eye is a computerized system that has been designed for self-defense, and these defense mechanisms create challenges in administration of medications to the eye. Therefore, ocular drug delivery has been a major challenge to drug delivery researchers. There are on-going studies, in search of treatment especially for the diseases affecting the posterior segment of the eye. This book

gives and overview of the background of ocular drug delivery and is unique for pharmacists, medical practitioners, students and drug delivery researchers.
The aim of this comprehenvise book is to present the most important results achieved in the research of the clay minerals palygorskite and sepiolite. Palygorskite and sepiolite have found to be useful in a huge variety of industrial and medical applications. As a result, research on these clays has been intensified during the last two decades, and important advances in their characterization have been made. The book contains contributions from distinguished scientists in the field. Comprehensive treatment of palygorskite and sepiolite Cutting-edge developments in industrial minerals and applications Written by distinguished scientists in the field
An in-depth exploration of the applications of plant bioactive metabolites in drug research and development Highlighting the complexity and applications of plant bioactive metabolites in organic and medicinal chemistry, Plant Bioactives and Drug Discovery: Principles, Practice, and Perspectives provides an in-depth overview of the ways in which plants can inform drug research and development. An edited volume featuring multidisciplinary international contributions from acclaimed scientists researching bioactive natural products, the book provides an incisive overview of one of the most important topics in pharmaceutical studies today. With coverage of strategic methods of natural compound isolation, structural manipulation, natural products in clinical trials, quality control, and more, and featuring case studies on medicinal plants, the book serves as a definitive guide to the field of plant biodiversity as it relates to medicine. In addition, chapters on using natural products as drugs that target specific disease areas, including neurological disorders, inflammation, infectious diseases, and cancer, illustrate the myriad possibilities for therapeutic applications. Wide ranging and comprehensive, Plant Bioactives and Drug Discovery also includes important information on marketing, regulations, intellectual property rights, and academic-industry collaboration as they relate to plant-based drug research, making it an essential resource for advanced students and academic and industry professionals working in biochemical, pharmaceutical, and related fields.
This book describes the theories, applications, and challenges for different oral controlled release formulations. This book differs from most in its focus on oral controlled release formulation design and process development. It also covers the related areas like preformulation, biopharmaceutics, in vitro-in vivo correlations (IVIVC), quality by design (QbD), and regulatory issues.
Solvent systems are integral to drug development and pharmaceutical technology. This single topic encompasses numerous allied subjects running the gamut from recrystallization solvents to biorelevant media. The goal of this contribution to the AAPS Biotechnology: Pharmaceutical Aspects series is to generate both a practical handbook as well as a reference allowing the reader to make effective decisions concerning the use of solvents and solvent systems. To this end, the monograph was created by inviting recognized experts from a

number of fields to author relevant sections. Specifically, 15 chapters have been designed covering the theoretical background of solubility, the effect of ionic equilibria and pH on solubilization, the use of solvents to effect drug substance crystallization and polymorph selection, the use of solvent systems in high throughput screening and early discovery, solvent use in preformulation, the use of solvents in bio-relevant dissolution and permeation experiments, solvents and their use as toxicology vehicles, solubilizing media and excipients in oral and parenteral formulation development, specialized vehicles for protein formulation and solvent systems for topical and pulmonary drug administration. The chapters are organized such that useful decision trees are included together with the scientific underpinning for their application. In addition, trends in the use of solvent systems and a balance of current views make this monograph useful to both the novice and experienced researcher and to scientists at all developmental stages from early discovery to late pharmaceutical operations.
This book presents recent advances in the use of ionic liquids in medicine and pharmaceutics with particular emphasis on addressing critical pharmaceutical challenges, including the low solubility, polymorphism, and bioavailability of drugs. It also provides insights into the development of the biologically functionalized ionic liquids suitable for medical and pharmaceutical applications. Ionic liquids have been used as potential solvents or materials in the fields of pharmaceutical drug delivery and formulations because of their unique and tunable physicochemical and biological properties. Readers find explanations of the diverse approaches to the application of ionic liquids in drug solubility, active pharmaceutical ingredient (API) formulation, and drug delivery systems, such as topical, transdermal, and oral delivery, with particular emphasis on recent developments. Particular attention is given to the development of ionic liquid-assisted effective drug delivery techniques for sparingly soluble or insoluble drug molecules. This book also discusses the biological activities of ionic liquids for possible applications in drug formulation and drug delivery systems. Scientists in disciplines such as chemistry, biology, and pharmaceutics find this book instructive and informative for developing ionic liquid-based drug formulations or drug delivery systems.
Cyclodextrins in Pharmaceutics, Cosmetics, and Biomedicine covers a wide range of knowledge on cyclodextrins, from an overview of molecular and supramolecular aspects of cyclodextrin physicochemistry, to the latest outcomes in cyclodextrin use and future possibilities in the employment of these systems. This book focuses on the derivatives and physicochemical and biological properties of cyclodextrins, and considers drug delivery through topical, mucosal, and oral via cyclodextrin complexes.
A clear, straightforward resource to guide you through preclinical drug development Following this book's step-by-step guidance, you can successfully initiate and complete critical phases of preclinical drug development. The book serves as a basic, comprehensive reference to prioritizing and optimizing leads, dose formulation, ADME, pharmacokinetics, modeling, and

regulations. This authoritative, easy-to-use resource covers all the issues that need to be considered and provides detailed instructions for current methods and techniques. Each chapter is written by one or more leading experts in the field. These authors, representing the many disciplines involved in preclinical toxicology screening and testing, give you the tools needed to apply an effective multidisciplinary approach. The editor has carefully reviewed all the chapters to ensure that each one is thorough, accurate, and clear. Among the key topics covered are: * Modeling and informatics in drug design * Bioanalytical chemistry * Absorption of drugs after oral administration * Transporter interactions in the ADME pathway of drugs * Metabolism kinetics * Mechanisms and consequences of drug-drug interactions Each chapter offers a full exploration of problems that may be encountered and their solutions. The authors also set forth the limitations of various methods and techniques used in determining the safety and efficacy of a drug during the preclinical stage. This publication should be readily accessible to all pharmaceutical scientists involved in preclinical testing, enabling them to perform and document preclinical safety tests to meet all FDA requirements before clinical trials may begin.
This much needed and timely book will provide students with an introduction to general concepts of polymer science and some insights into speciality polymers. Polymers are becoming increasingly present in the domain of health yet introduction to polymers is not frequently taught. Biomedical and Pharmaceutical Polymers is the only book available for introducing polymers to graduate or post-graduate students who use them in the biomedical and pharmaceutical fields. In four sections the book covers: * why study polymers for the health sciences? * general characteristics of polymers * main methods and processes to synthesize polymers * special properties of polymers The final section of the book also contains case studies and detailed examples of biomedical and pharmaceutical applications. Biomedical and Pharmaceutical Polymers is a user-friendly textbook which will be an essential reference for postgraduate pharmaceutical science students, pharmaceutical scientists worldwide and pharmacy undergraduate students with an interest in polymers.
In this concise and systematic book, a team of experts select the most important, cutting-edge technologies used in drug delivery systems. They take into account significant drugs, new technologies such as nanoparticles, and therapeutic applications. The chapters present step-by-step laboratory protocols following the highly successful Methods in Molecular BiologyTM series format, offering readily reproducible results vital for pharmaceutical physicians and scientists.
This title includes a number of Open Access chapters. Pharmaceutical technology deals with the discovery, production, processing, and safe and effective delivery of medications to patients. Technologies involved include computer modeling for research, bioengineering for research instrumentation, processes and methods for increasing production, and computing technology and biosystematics for the management and analysis of data. This new book covers a wide range of important topics on today’s pharmaceutical technology, such as in vitro drug release and controlled drug delivery, the use of nanotechnology in pharmaceuticals, quantum dot imaging, assessment and efficacy of pharmaceuticals, and much more.
Advances in technology permeates every aspect of life, including the healthcare system. Nanotechnology based systems have gained popularity based upon their promise, size, and other characteristics. Multifunctional Nanocarriers for Contemporary Healthcare Applications is a critical academic publication that explores advancements in nanostructured systems, applications of these systems in healthcare, and biomedical applications of these systems. Featuring coverage on a wide range of topics, such as hydrogels, controlled drug delivery systems, and nanomedicine, this book is geared toward researchers, students, and academicians seeking current research on advancements and applications of nanostructured systems in the healthcare industry.
This book is a printed edition of the Special Issue "Advances in Marine Chitin and Chitosan"

that was published in Marine Drugs

Discover the latest ICH news from international experts in the pharmaceutical industry, academia, and regulatory bodies. The recent International Conference on Harmonisation (ICH) revisions of regulatory requirements for quality, nonclinical, and clinical pharmaceutical product registration are the focus of this timely update. This cutting-edge resource includes the major headings in the modular structure of the Common Technical Document (CTD), which is now the agreed format for product information submission. The format, specification, and technical requirements of the e-CTD, the electronic version of CTD, are also thoroughly discussed. The book is organized into six highly practical segments: Part I: CTD, eCTD, Module 1, and Environmental Risk Assessment Part II: CTD Summaries Part III: Quality Topics Part IV: Nonclinical Topics Part V: Clinical Topics Part VI: Other Topics (including drug-device combination products) This text is a must-have for those in the pharmaceutical industry determining regulatory requirements for the major world markets in Europe, the US, Canada, and Japan.

Handbook of Pharmaceutical Excipients

Shows how making some practical changes can preserve a sharp memory, optimize wellness, and change how one responds to stress.

Lipid Nanocarriers in Cancer Diagnosis and Therapy fills a need for an accurate, coherent and authoritative introduction to lipid nanocarriers focusing in cancer therapy; both because of the growing popularity of these modern drug delivery systems and also because of the emergent need of dealing with cancer treatment. This handbook deals with lipid nanocarriers for targeted delivery to tumours of various organs and combination of these with other methods of treatment of cancer such as radiotherapy, diagnostic and imaging analysis. Lipid nanocarriers are also used for gene therapy for cancer.

The suspension dosage form has long been used for poorly soluble active ingre- ents for various therapeutic indications. Development of stable suspensions over the shelf life of the drug product continues to be a challenge on many fronts. A good understanding of the fundamentals of disperse systems is essential in the development of a suitable pharmaceutical suspension. The development of a s- pension dosage form follows a very complicated path. The selection of the proper excipients (surfactants, viscosity imparting agents etc.) is important. The particle size distribution in the finished drug product dosage form is a critical parameter that significantly impacts the bioavailability and pharmacokinetics of the product. Appropriate analytical methodologies and instruments (chromatographs, visco- ters, particle size analyzers, etc.) must be utilized to properly characterize the s- pension formulation. The development process continues with a successful scale-up of the manufacturing process. Regulatory agencies around the world require cli- cal trials to establish the safety and efficacy of the drug product. All of this devel- ment work should culminate into a regulatory filing in accordance with the regulatory guidelines. Pharmaceutical Suspensions, From Formulation Development to Manufacturing, in its organization, follows the development approach used widely in the pharmaceutical industry. The primary focus of this book is on the classical disperse system – poorly soluble active pharmaceutical ingredients s- pended in a suitable vehicle.

The ability to create intelligent machines has intrigued humans since ancient times, and today with the advent of the computer and 50 years of research into AI programming techniques, the dream of smart machines is becoming a reality. The concept of human-

computer interfaces has been undergoing changes over the years. In carrying out the most important tasks is the lack of formalized application methods, mathematical models and advanced computer support. The evolution of biological systems to adapt to their environment has fascinated and challenged scientists to increase their level of understanding of the functional characteristics of such systems. This book has 19 chapters and explain that the expert systems are products of the artificial intelligence, branch of computer science that seeks to develop intelligent programs for human, materials and automation.

The U.S. Food and Drug Administration (FDA) has approved dozens of hormone therapy products for men and women, including estrogen, progesterone, testosterone, and related compounds. These products have been reviewed for safety and efficacy and are indicated for treatment of symptoms resulting from hormonal changes associated with menopause or other endocrine-based disorders. In recent decades, an increasing number of health care providers and patients have turned to custom-formulated, or compounded, drug preparations as an alternative to FDA-approved drug products for hormone-related health concerns. These compounded hormone preparations are often marketed as "bioidentical" or "natural" and are commonly referred to as compounded bioidentical hormone therapy (cBHT). In light of the fast-growing popularity of cBHT preparations, the clinical utility of these compounded preparations is a substantial public health concern for various stakeholders, including medical practitioners, patients, health advocacy organizations, and federal and state public health agencies. This report examines the clinical utility and uses of cBHT drug preparations and reviews the available evidence that would support marketing claims of the safety and effectiveness of cBHT preparations. It also assesses whether the available evidence suggests that these preparations have clinical utility and safety profiles warranting their clinical use and identifies patient populations that might benefit from cBHT preparations in lieu of FDA-approved BHT.

For over 100 years, Remington has been the definitive textbook and reference on the science and practice of pharmacy. This Twenty-First Edition keeps pace with recent changes in the pharmacy curriculum and professional pharmacy practice. More than 95 new contributors and 5 new section editors provide fresh perspectives on the field. New chapters include pharmacogenomics, application of ethical principles to practice dilemmas, technology and automation, professional communication, medication errors, re-engineering pharmacy practice, management of special risk medicines, specialization in pharmacy practice, disease state management, emergency patient care, and wound care. Purchasers of this textbook are entitled to a new, fully indexed Bonus CD-ROM, affording instant access to the full content of Remington in a convenient and portable format.

Drug Delivery is the latest and most up-to-date text on drug delivery and offers an excellent working foundation for students and clinicians in health professions and graduate students including nursing, pharmacy, medicine, dentistry, as well as researchers and scientists. Presenting this complex content in an organized and concise format, Drug Delivery allows students to gain a strong understanding of the key concepts of drug delivery.This text focuses on the basic concepts of drug delivery while thoroughly examining various topics such as: CNS delivery Gene delivery Ocular delivery World-wide research on drug delivery Recent advances in drug deliveryA

significant advancement has been made in the field of drug delivery. This text provides a detailed overview of drug delivery systems, routes of drug administration and development of various formulations. The cutting edge research being carried out in this field will be compiled and a focus on worldwide research on drug delivery and targeting at the molecular, cellular, and organ levels will also be summarized.Each new print copy includes access to the Navigate Companion Website including: Chapter Quizzes, Interactive Glossary, Crossword Puzzles , Interactive Flashcards, and Matching Exercises