Current Molecular Pharmacology Molecular And Functional

This manual is an indispensable tool for introducing advanced undergraduates and beginning graduate students to the techniques of recombinant DNA technology, or gene cloning and expression. The techniques used in basic research and biotechnology laboratories are covered in detail. Students gain hands-on experience from start to finish in subcloning a gene into an expression vector, through purification of the recombinant protein. The third edition has been completely re-written, with new laboratory exercises and all new illustrations and text, designed for a typical 15-week semester, rather than a 4-week intensive course. The "project" approach to experiments was maintained: students still follow a cloning project through to completion, culminating in the purification of recombinant protein. It takes advantage of the enhanced green fluorescent protein - students can actually visualize positive clones following IPTG induction. Cover basic concepts and techniques used in molecular biology research labs Student-tested labs proven successful in a real classroom laboratories Exercises simulate a cloning project that would be performed in a real research lab "Project" approach to experiments gives students an overview of the entire process Prep-list appendix contains necessary recipes and catalog numbers, providing staff with detailed instructions

With a focus on functional relationships between drugs and their targets, this book covers basic and general pharmacology, from a cellular and molecular perspective, with particular attention to the mechanisms of drug action – the fundamental basis for proper clinical use- without neglecting clinical application, toxicology and pharmacokinetics. • Covers cell and molecular pharmacology, bringing together current research on regulation of drug targets, at a level appropriate for advanced undergrad and graduate students • Discusses the relevance of pharmacokinetics and drug development for the clinical application of drugs • Presents material from the perspective of drug targets and interaction, the theoretical basis of drug action analysis, and drug properties • Focuses on structure-function relationships of drug targets – informing about their biochemical and physiologic functions and experimental and clinical pathways for drug discovery and development • Has a companion website that offers a host of resources: short additional chapters about methodology, topics at the forefront of research, and all figures and tables from the book

Natural products in the plant and animal kingdom offer a huge diversity of chemical structures that are the result of biosynthetic processes that have been modulated over the millennia through genetic effects. With the rapid developments in spectroscopic techniques and accompanying advances in high-throughput screening techniques, it has become possible to isolate and then determine the structures and biological activity of natural products rapidly, thus opening up exciting opportunities in the field of new drug development to the pharmaceutical industry. Studies in Natural Products Chemistry covers the synthesis or testing and recording of the medicinal properties of natural products, providing cutting edge accounts of the fascinating developments in the isolation, structure elucidation, synthesis, biosynthesis and pharmacology of a diverse array of bioactive natural products. Focuses on the chemistry of bioactive natural products Contains contributions by leading authorities in the field Presents sources of new pharmacophores

Rang & Dale’s Pharmacology provides you with all the knowledge you need to get through your pharmacology course and beyond. Drs. Humphrey P. Rang, Maureen M. Dale, James M. Ritter, Rod Flower, and Graeme Henderson present a clear and accessible approach to the analysis of therapeutic agents at the cellular and molecular level through detailed diagrams, full-color illustrations, and pedagogical features. Find and cross-reference information quickly using a color-coded layout that makes navigation easy. Effectively understand and review key

concepts through detailed diagrams and full-color illustrations that clarify even the most complex concepts. Reinforce your learning with key points boxes and clinical uses boxes that highlight crucial information and clinical applications. Apply current best practices and clinical applications through thoroughly updated and revised drug information. Stay current with the latest developments in the field thanks to major updates in chapters such as How Drugs Act; Amino Acid Transmitters; Analgesic Drugs; Antidepressant Drugs; and Drug Addiction, Dependence & Abuse. Tap into comprehensive content tailored to your courses with new and reorganized chapters on Host Defense; Inflammatory Mediators; Pharmacogenetics, Pharmacogenomics & Personalized Medicine; Hydroxytoptomine & The Pharmacy of Migraine; and Purines.

This book concentrates on recent developments related to the application of original structural biology, biochemistry, biophysics, physiology, genetics, and molecular biology as well as basic pharmacological problems that offer mechanistic insights that are generally significant for the field of pharmacology. Written by experts, chapters cover such topics as drug transport mechanisms and drug–receptor complexes. This volume offers up-to-date, expert reviews of the fast-moving field of molecular pharmacology.

This publication is based on peer-reviewed manuscripts from the 2019 Conference on Drug Design & Discovery Technologies (CDDT) held at Ramaiah University of Applied Sciences, India. Providing a wide range of up to date topics on the latest advancements in drug design and discovery technologies, this book ensures the reader receives a good understanding of the scope of the field. Aimed at scientists, students, regulators, academics and consultants throughout the world, this book is an ideal resource for anyone interested in the state of the art in drug design and discovery.

Molecular Toxinology has been consolidated as a scientific area focused on the intertwined description of several aspects of animal toxins. In an inquiring biotechnological world, animal toxins appear as an invaluable source for the discovery of therapeutic polypeptides. Animal toxins rely on specific chemical interactions with their partner molecule to exert their biological actions. The comprehension of how molecules interact and recognize their target is essential for the rational exploration of bioactive polypeptides as therapeutics. Investigation on the mechanism of molecular interaction and recognition offers a window of opportunity for the pharmaceutical industry and clinical medicine. Thus, this book brings examples of two interconnected themes - molecular recognition and toxinology concerning to the integration between analytical procedures and biomedical applications.

G protein-coupled receptors (GPCRs) are membrane proteins that transduce a vast array of extracellular signals into intracellular reactions ranging from cell-cell communication processes to physiological responses. They play an important role in a variety of diseases from cancer and diabetes, to neurodegenerative, inflammatory and respiratory disorders. GPCRs are therefore of utmost interest in drug development: over half of all prescription drugs currently on the market act by targeting these receptors directly or indirectly. G Protein-coupled Receptors: Molecular Pharmacology provides a clear summary of the current knowledge in this fast-evolving field. The book sets out with an introduction to signalling molecules and their receptors, and an overview of the technical approaches used to investigate these interactions. Structural, functional and especially pharmacological aspects of GPCRs are then discussed in more detail and much attention is devoted to the analysis and interpretation of experimental data. The now widespread use of recombinant cell lies, receptor mutants and related

artifices in drug research is critically evaluated. Special attention is also devoted to topical but often poorly understood concepts, such as insurmountable antagonism, inverse agonism and allosteric interactions. By combining general information with the major state-of-the-art concepts in GPCR-research, this outstanding book equips the reader with the necessary background for understanding and critically evaluating the current literature. Written by two experts from academia and industry, G Protein-coupled Receptors: Molecular Pharmacology offers a unique view of academic and applied approaches aiming to reveal new ideas in pharmaceutical research. The book is of interest to anyone involved in drug development and preclinical research and those who need to function within multi-disciplinary teams in the pharmaceutical industry: from investigators to product managers or clinicians who seek to have a broad mechanistic understanding of drug-receptor interactions. It is also an invaluable resource for final year undergraduate and postgraduate students in pharmacology and cell and molecular biology.

As a general rule, for every 10,000 molecules screened in a given program in the laboratory, only one will survive to launch. To minimize costs, companies need to catch potential failures, due either to lack of clinical effect or toxicity, in the early discovery phase, long before they reach patients. Experimental Therapeutics introduces the dynamic and competitive discipline of experimental medicine. Informative, concise, and easy-to-read, the book emphasizes what scientists involved in drug discovery need to know about the rapid advances made in molecular biology, genetics, and technology. Each chapter starts with a summary box, has several high yield boxes, tables, and figures and ends with a reference section that has key URLs and carefully selected references to scientific papers. The book is a useful primer for anyone working to advance the pharmacological management of disease.

Presents current information on the molecular mechanisms of drug action. Provides 159 essays describing groups of drugs and drug targets. Several essays deal with general principles of pharmacology, such as drug tolerance, drug addiction, or drug metabolism.

Cannabinoid Pharmacology, Volume 80 is a new volume in the Advances in Pharmacology that presents reviews of recent breakthroughs. This volume aims to present current knowledge of the endogenous cannabinoid system, and looks at molecular, cellular, tissue and organismal effects of endogenous and exogenous cannabinoids. Topics of note in this new volume include Endocannabinoids and their congeners, Endocannabinoid turnover, Plant cannabinoids, Synthetic cannabinoids and ‘legal highs’, CB1 and CB2 cannabinoid receptors, Novel signaling modalities, Novel cannabinoid receptors, and Ion channel regulation by cannabinoids. There is a broad coverage of the essential elements associated with the cannabinoid system. The Editors have sought to include authors who represent authoritative voices on these themes, but have not previously worked together to allow a fresh approach to the

individual aspects covered. Presents reviews of recent breakthroughs in the cannabinoid system Features chapters from the best authors in the field Provides an essential resource for scientists, advanced undergraduate students through to established faculty members

Fully updated and expanded to reflect recent advances, this Fourth Edition of the classic text provides students and professional chemists with an excellent introduction to the principles and general properties of organometallic compounds, as well as including practical information on reaction mechanisms and detailed descriptions of contemporary applications.

Thoroughly updated from the previous edition, this book provides an overview of the most important aspects of pharmacology--focusing on the concepts, clinical applications, and side effects that are considered essential knowledge in the field. Covers gene therapy, eating disorders and obesity, herbal and natural products, the treatment of neurological disorders, including Alzheimer's disease, and other rapid expanding areas.

General and Molecular PharmacologyPrinciples of Drug ActionJohn Wiley & Sons

Even though there has been improvement in treatment and significant reduction in mortality rate, cardiovascular disease remains one of the leading causes of death around the world. Drug therapy continues to rank high as a way to manage heart disease – making cardiovascular pharmacology a key part of medical education and drug development research. This book addresses the needs of these students and researchers by systematically integrating essentials, advances, and clinical correlations for cardiovascular drugs. The author, who has over two decades of experience teaching this topic, covers both the fundamentals and most recent advances in the pharmacology of cardiovascular drugs, as well as their integrated applications in the management of individual cardiovascular diseases. In addition, the text presents evidence-based pharmacotherapeutics in the management of common cardiovascular diseases and conditions that include dyslipidemias, hypertension, ischemic heart disease, heart failure, cardiac arrhythmias, and ischemic stroke. Written in an accessible style and consistent format, the book covers both the fundamentals and advances in the pharmacology of cardiovascular drugs, as well as their integrated applications in the management of individual cardiovascular diseases. • Blends basic and clinical sciences needed to effectively understand and treat cardiovascular diseases • Facilitates understanding of drug action and mechanism by covering physiology / pathophysiology and pharmacology • Includes guidelines and algorithms for pharmacotherapeutic management of cardiovascular diseases • Uses case presentations and study questions to enhance understanding of the material • Serves as a resource for pharmaceutical and medical students and researchers interested in cardiovascular issues

A clinically relevant introduction to pharmacology, this book approaches the subject by organizing drugs of a class according to the characteristics of the class (including mechanisms of action and side effects). Individual drugs are then discussed in relation to other drugs in their class.

This textbook provides a fresh, comprehensive and accessible introduction to the rapidly expanding field of molecular pharmacology. Adopting a drug target-based, rather than the traditional organ/system based, approach this innovative guide reflects the current advances and research trend towards molecular based drug design, derived from a detailed understanding of chemical responses in the body. Drugs are then tailored to fit a treatment

profile, rather than the traditional method of ‘trial and error’ drug discovery which focuses on testing chemicals on animals or cell cultures and matching their effects to treatments. Providing an invaluable resource for advanced under-graduate and MSc/PhD students, new researchers to the field and practitioners for continuing professional development, Molecular Pharmacology explores; recent advances and developments in the four major human drug target families (G-protein coupled receptors, ion channels, nuclear receptors and transporters), cloning of drug targets, transgenic animal technology, gene therapy, pharmacogenomics and looks at the role of calcium in the cell. Current - focuses on cutting edge techniques and approaches, including new methods to quantify biological activities in different systems and ways to interpret and understand pharmacological data. Cutting Edge - highlights advances in pharmacogenomics and explores how an individual’s genetic makeup influences their response to therapeutic drugs and the potential for harmful side effects. Applied - includes numerous, real-world examples and a detailed case-study based chapter which looks at current and possible future treatment strategies for cystic fibrosis. This case study considers the relative merits of both drug therapy for specific classes of mutation and gene therapy to correct the underlying defect. Accessible - contains a comprehensive glossary, suggestions for further reading at the end of each chapter and an associated website that provides a complete set of figures from within the book.

Melatonin, the pineal neurohormone, is a pleiotropic molecule acting in the center of the integrative molecular mechanisms of the organism, based on interconnections of the regulatory systems: neural, endocrine, immune, and genetic, conveying into the uniqueness of human architecture. This book provides a systematic and updated overview of melatonin biochemical mechanisms of action, pharmacological features, and clinical uses, clutching the subject with complete details of pharmaceutical formulations designed for different routes of administration and different health issues, aiming at optimal melatonin bioavailability when therapeutically delivered. The book addresses a broad range of audiences, from healthcare professionals, medically and pharmaceutically based, to highly profiled medical specialists and biomedical researchers, helping them to expand their knowledge of the physiological and pathological implications of melatonin and its metabolites.

After decades of systematic collection of data describing age-related changes in organisms, organs, tissues, cells and macromolecules, biogerontologists are now in a position to construct general principles of ageing and explore various possibilities of intervention using rational approaches. While not giving serious consideration to the claims made by charlatans, it cannot be ignored that several researchers are making genuine attempts to test and develop various means of intervention for the prevention and treatment of age-related diseases, for regaining the functional abilities and for prolonging the lifespan of experimental organisms. This book provides the most up-to-date information and a critical evaluation of a variety of approaches being tried for modulating aging and longevity, including dietary supplementation with antioxidants, vitamins and hormones, genetic engineering, life-style alterations, and hormesis through mild stress. The goal of research on ageing is not to increase human longevity regardless of the consequences, but to increase active longevity free from disability and functional dependence.

Everything you need to know about all of today's drugs in a coherent, easy-to-use format - from the underlying science through innovation, translation, regulation, and clinical implementation. This multimedia resource fills a critical need for a more clinically focused, user-friendly pharmacology reference. Evidence-based therapeutic guidelines facilitate decision making; and coverage of pharmacogenetics and pharmacogenomics, regenerative pharmacology, stem cell therapies, and the emerging field of individualized medicine keeps you at the forefront of the latest developments.

Carbohydrate bioengineering is a rapidly expanding field with many applications in medicine

and industry. Presenting state-of-the-art research, Carbohydrate Bioengineering: Interdisciplinary Approaches brings together international experts on many different aspects of this burgeoning topic. Coverage includes: the engineering of glycosidases for constructive purposes; structure-function studies and protein engineering of carbohydrate-active enzymes; chemo-enzymatic carbohydrate synthesis; and trends emerging from comprehensive work on genomes and glycomes. This timely publication will be welcomed by all those needing access to the latest research in the field, including practitioners in the medicinal, chemical, food and pharmaceutical areas.

The Carbohydrate Bioengineering Meeting held in Elsinore, Denmark, April 23-26, 1995, gathered 230 scientists, mostly from Europe, with interest in carbohydrate analysis and structure; carbohydrates in medicine and glycopathology; structure, function, application, and protein engineering of carbohydrate active enzymes; oligo- and polysaccharides of industrial interest; and production of carbohydrate containing new materials. The first chapters address glycoconjugates as modulatory and recognition molecules, structure determination using NMR and mass spectrometry, and microdialysis-chip enzyme-based sensors. Active site mutations coupled with crystal structures and synthetic substrate analogue interactions as well as new three-dimensional structures and binding domains for biotechnological applications are included in the chapters. Carbohydrate active enzymes turned out to be a predominant topic. The rapid development in glycobiology and glycotechnology has resulted in an enormous increase in our knowledge on the structure conversion, and application of carbohydrates in industry and medicine.

This book addresses the therapeutic strategies to target mitochondrial metabolism in diseases where the function of that organelle is compromised, and it discusses the effective strategies used to create mitochondrial-targeted agents that can become commercially available drug delivery platforms. The consistent growth of research focused in understanding the multifaceted role of mitochondria in cellular metabolism, controlling pathways related with cell death, and ionic/redox regulation has extended the research of mitochondrial chemical-biological interactions to include various pharmacological and toxicological applications. Not only does the book extensively cover basic mitochondrial physiology, but it also links the molecular interactions within these pathways to a variety of diseases. It is one of the first books to combine state-of-the-art reviews regarding basic mitochondrial biology, the role of mitochondrial alterations in different diseases, and the importance of that organelle as a target for pharmacological and non-pharmacological interventions to improve human health. The different chapters highlight the chemical-biological linkages of the mitochondria in context with drug development and clinical applications.

This book focuses on the basic aspects of dental stem cells (DSCs) as well as their clinical applications in tissue engineering and regenerative medicine. It opens with a discussion of classification, protocols, and properties of DSCs and proceeds to explore DSCs within the contexts of cryopreservation; epigenetics; pulp, periodontal, tooth, bone, and corneal stroma regeneration; neuronal properties, mesenchymal stem cells and biomaterials; and as sources of hepatocytes for liver disease treatment. The fifteen expertly authored chapters comprehensively examine possible applications of DSCs and provide invaluable insights into mechanisms of growth and differentiation. Dental Stem Cells: Regenerative Potential draws from a wealth of international perspectives and is an essential addition to the developing literature on dental stem cells. This installment of Springer’s Stem Cell Biology and Regenerative Medicine series is indispensable for biomedical researchers interested in bioengineering, dentistry, tissue engineering, regenerative medicine, cell biology and oncology.

G protein coupled receptors remain the most important class of therapeutic targets in medicine. In the last 5 years, tremendous advances have been made in our understanding of the structure and mechanism of this critical family of drug targets. The present volume explores

the modern experimental and conceptual framework for drug discovery for G protein coupled receptors. It explores advances in structure determination and structure-based drug design as well as new concepts of allosteric modulation, functional selectivity/biased agonism, and pharmacological chaperones. In addition, emerging drug targets such as receptor families for fatty acids, carboxylic acids, lipid mediators, etc. are included. Final chapters cover novel mechanisms of signal regulation through PDZ domains and RGS proteins. This volume will bring an up-to-date perspective on the G protein coupled receptor field to both academic and industry scientists. The present volume explores the modern experimental and conceptual framework for drug discovery for G protein coupled receptors It explores advances in structure determination and structure-based drug design as well as new concepts of allosteric modulation, functional selectivity/biased agonism, and pharmacological chaperones This volume will bring an up-to-date perspective on the G protein coupled receptor field to both academic and industry scientists

DNA Repair and Cancer Therapy: Molecular Targets and Clinical Applications, Second Edition provides a comprehensive and timely reference that focuses on the translational and clinical use of DNA repair as a target area for the development of diagnostic biomarkers and the enhancement of cancer treatment. Experts on DNA repair proteins from all areas of cancer biology research take readers from bench research to new therapeutic approaches. This book provides a detailed discussion of combination therapies, in other words, how the inhibition of repair pathways can be coupled with chemotherapy, radiation, or DNA damaging drugs. Newer areas in this edition include the role of DNA repair in chemotherapy induced peripheral neuropathy, radiation DNA damage, Fanconi anemia cross-link repair, translesion DNA polymerases, BRCA1-BRCA2 pathway for HR and synthetic lethality, and mechanisms of resistance to clinical PARP inhibitors. Provides a comprehensive overview of the basic and translational research in DNA repair as a cancer therapeutic target Includes timely updates from the earlier edition, including Fanconi Anemia cross-link repair, translesion DNA polymerases, chemotherapy induced peripheral neuropathy, and many other new areas within DNA repair and cancer therapy Saves academic, medical, and pharma researchers time by allowing them to quickly access the very latest details on DNA repair and cancer therapy Assists researchers and research clinicians in understanding the importance of the breakthroughs that are contributing to advances in disease-specific research

This book illustrates, in a comprehensive manner, the most crucial principles involved in pharmacology and allied sciences. The title begins by discussing the historical aspects of drug discovery, with up to date knowledge on Nobel Laureates in pharmacology and their significant discoveries. It then examines the general pharmacological principles - pharmacokinetics and pharmacodynamics, with in-depth information on drug transporters and interactions. In the remaining chapters, the book covers a definitive collection of topics containing essential information on the basic principles of pharmacology and how they are employed for the treatment of diseases. Readers will learn about special topics in pharmacology that are hard to find elsewhere, including issues related to environmental toxicology and the latest information on drug poisoning and treatment, analytical toxicology, toxicovigilance, and the use of molecular biology techniques in pharmacology. The book offers a valuable resource for researchers in the fields of pharmacology and toxicology, as well as students pursuing a degree in or with an interest in pharmacology.

An essential text, this is a fully updated second edition of a classic, now in two volumes. It provides rapid access to information on molecular pharmacology for research scientists, clinicians and advanced students. With the A-Z format of over 2,000 entries, around 350 authors provide a complete reference to the area of molecular pharmacology. The book combines the knowledge of classic pharmacology with the more recent approach of the precise analysis of the molecular mechanisms by which drugs exert their effects. Short keyword entries

define common acronyms, terms and phrases. In addition, detailed essays provide in-depth information on drugs, cellular processes, molecular targets, techniques, molecular mechanisms, and general principles.

This reference work gives a compete overview of the different stages of drug development using a translational approach. The book is structured in different parts, following the different stages in drug development. Almost half of the work is dedicated to core of drug discovery using a translational approach, the identification of appropriate targets and screening methods for the identification of compounds interacting with these targets. The rest of book covers the whole downstream pipeline after the identification of lead compounds, such as bioavailability issues, identification of appropriate drug delivery venues, production and scaling issues and preclinical trials. As has been the case with other works in the encyclopedia, the book is made up of long, comprehensive and authoritative chapters, written by outstanding researchers in the field.

This highly illustrated, step-by-step guide gives detailed instructions for dozens of different manipulation techniques, covering all levels of the spine, thorax, and pelvis. It also includes a helpful overview of the principles and theory of spinal manipulation and its use in clinical practice. The accompanying DVD contains video clips demonstrating the techniques described in the book. The new edition is a highly illustrated, step-by-step guide to 41 manipulation techniques commonly used in clinical practice. The book also provides the related theory essential for safe and effective use of manipulation techniques.

The book presents the current state of the art on phytocannnabinoid chemistry and pharmacology and will be of much use to those wishing to understand the current landscape of the exciting and intriguing phytocannabinoid science. The focus is on natural product cannabinoids which have been demonstrated to act at specific receptor targets in the CNS.

G protein-coupled receptors (GPCRs) are a large protein family of transmembrane receptors vital in dictating cellular responses. GPCRs are involved in many diseases, but are also the target of around half of all modern medicinal drugs. Shifting Paradigms in G Protein Coupled Receptors takes a look at the way GPCRs are examined today, how they react, how their mutations lead to disease, and the many ways in which they can be screened for compounds that modulate them. Chemists, pharmacologists, and biologists will find essential information in this comprehensive reference.

This revised second edition covers the pharmacologic principles underlying the individualization of patient therapy and contemporary drug development, focusing on the fundamentals that underlie the clinical use and contemporary development of pharmaceuticals. Authors drawn from academia, the pharmaceutical industry and government agencies cover the spectrum of material, including pharmacokinetic practice questions, covered by the basic science section of the certifying examination offered by the American Board of Clinical Pharmacology. This unique reference is recommended by the Board as a study text and includes

modules on drug discovery and development to assist students as well as practicing pharmacologists. Unique breadth of coverage ranging from drug discovery and development to individualization and quality assessment of drug therapy Unusual cohesive of presentation that stems from author participation in an ongoing popular NIH course Instructive linkage of pharmacokinetic theory and applications with provision of sample problems for self-study Wide-ranging perspective of authors drawn from the ranks of Federal agencies, academia and the pharmaceutical industry Expanded coverage of pharmacogenetics Expanded coverage of drug transporters and their role in interactions Inclusion of new material on enzyme induction mechanisms in chapters on drug metabolism and drug interactions A new chapter on drug discovery that focuses on oncologic agents Inclusion of therapeutic antibodies in chapter on biotechnology products Cellular and Molecular Pathobiology of Cardiovascular Disease focuses on the pathophysiology of common cardiovascular disease in the context of its underlying mechanisms and molecular biology. This book has been developed from the editors' experiences teaching an advanced cardiovascular pathology course for PhD trainees in the biomedical sciences, and trainees in cardiology, pathology, public health, and veterinary medicine. No other single text-reference combines clinical cardiology and cardiovascular pathology with enough molecular content for graduate students in both biomedical research and clinical departments. The text is complemented and supported by a rich variety of photomicrographs, diagrams of molecular relationships, and tables. It is uniquely useful to a wide audience of graduate students and post-doctoral fellows in areas from pathology to physiology, genetics, pharmacology, and more, as well as medical residents in pathology, laboratory medicine, internal medicine, cardiovascular surgery, and cardiology. Explains how to identify cardiovascular pathologies and compare with normal physiology to aid research Gives concise explanations of key issues and background reading suggestions Covers molecular bases of diseases for better understanding of molecular events that precede or accompany the development of pathology

The Advances in Pharmacology series presents a variety of chapters from the best authors in the field. Includes the authority and expertise of leading contributors in pharmacology Presents the latest release in the Advances in Pharmacology series

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