

Comparative And Veterinary Pharmacology Vol 199

Now in a revised edition, *Comparative Pharmacokinetics: Principles, Techniques, and Applications* presents the principles and techniques of comparative and veterinary pharmacokinetics in a detailed yet practical manner. Developed as a tool for ensuring that pharmacokinetics studies are properly designed and correctly interpreted, the book provides complete coverage of the conceptual basis of pharmacokinetics as used for quantifying biological processes from the perspectives of physiology and medicine. New chapters have been added on quantitative structure permeability relationships and bioequivalence, and a number of existing chapters have been significantly revised and expanded to provide a current resource for veterinary and comparative pharmacokinetics.

This book presents a unique, highly practical overview of pharmacokinetics. It explains the scientific data and mathematical models of the discipline within the context of biological reality. *Comparative Pharmacokinetics* uses a complete model of the field, from facts and constructs to clinical manifestations. Written for students, researchers, and comparative medicine clinicians, the book thoroughly explains and assesses both mechanistic, compartmental models, and the newer empirical noncompartmental models, considering strengths and weaknesses of each. *Comparative Pharmacokinetics* also explains establishment of appropriate parameters and proper collection and linking of data. Cross-referenced information provides multiple opportunities for study from a variety of perspectives and ultimately aids decision making. The book concludes with application of techniques to common problems.

Christina Smolke, who recently developed a novel way to churn out large quantities of drugs from genetically modified brewer's yeast, is regarded as one of the most brilliant minds in biomedical engineering. In this handbook, she brings together pioneering scientists from dozens of disciplines to provide a complete record of accomplishment in metab

This book discusses the structural and functional characteristics of the digestive system and how these vary among vertebrates.

Veterinary medicine is advancing at a very rapid pace, particularly given the breadth of the discipline. This book examines new developments covering a wide range of issues from health and welfare in livestock, pets, and wild animals to public health supervision and biomedical research. As well as containing reviews offering fresh insight into specific issues, this book includes a selection of scientific articles which help to chart the advance of this science. The book is divided into several sections. The opening chapters cover the veterinary profession and veterinary science in general, while later chapters look at specific aspects of applied veterinary medicine in pets and in livestock. Finally, research papers are grouped by specialisms with a view to exploring progress in areas such as organ transplantation, therapeutic use of natural substances, and the use of new diagnostic techniques for disease control. This book was produced during World Veterinary Year 2011, which marked the 250th anniversary of the veterinary profession. It provides a fittingly concise and enjoyable overview of the whole science of veterinary medicine.

Pharmacology of Neuromuscular Function, Second Edition provides information pertinent to drugs that affect membrane potentials of the conduction of action potentials in nerve endings and muscle fibers. This book reviews, in a general way, some of the properties of excitable membranes. Organized into seven chapters, this edition begins with an overview of innervation of striated muscles by somatic efferent nerve fibers. This text then explains the transmission from nerve to muscle, which is mediated by acetylcholine that is synthesized and stored in the axon terminals. Other chapters consider the different steps in the transmission process that occur in the nerve endings, which may be

modified by the actions of drugs and toxins. This book discusses as well the primary action of neuromuscular-blocking agents. The final chapter deals with the cytoplasm of a muscle cell or fiber that contains all the usual subcellular organelles, including mitochondria and nuclei. This book is a valuable resource for pharmacologists and anesthetists.

Leading scientists from different countries around the world contributed valuable essays on the basic applications and safety, as well as the ethical and moral considerations, of the powerful genetic engineering tools now available for modifying the molecules, pathways, and phenotypes of species of agricultural, industrial and even medical importance. After three decades of perfecting such tools, we now see a refined technology, surprisingly unexpected applications, and matured guidelines to avoid unintentional damage to our and other species, as well as the environment, while trying to contribute to solve the biological, medical and technical challenges of society and industry. Chapters on thermo-stabilization of luciferase, engineering of the phenylpropanoid pathway in a species of high demand for the paper industry, more efficient regeneration of transgenic soybean, viral resistant plants, and a novel approach for rapidly screening properties of newly discovered animal growth hormones, illustrate the state-of-the-art science and technology of genetic engineering, but also serve to raise public awareness of the pros and cons that this young scientific discipline has to offer to mankind.

Comparative and Veterinary Pharmacology Springer Science & Business Media

Laboratory animal testing provides most of our current knowledge of human physiology, microbiology, immunology, pharmacology, and pathology. From studies of genetics in fruit flies to studies of cellular processes in genetically modified mice to recent dramatic developments in genetics, translational research, and personalized medicines, biomedical

Behavioural models in psychopharmacology are used for different purposes. The main concern of industrial psychopharmacologists is specifically to develop new and improved drugs for the treatment of mental disorders, while basic scientists use animal models to investigate the underlying nature of such conditions. The important distinction between these different perspectives is made explicit for the first time in this book. By considering such conditions as anxiety, depression, mania and schizophrenia, feeding disorders, dementia, and drug dependence, this book provides a comprehensive and critical review of the adequacy of the behavioural procedures used by psychopharmacologists to model psychiatric disorders. Graduate students and research workers in psychopharmacology, from both academic and industrial spheres, as well as clinicians, will find this book of considerable interest.

This comprehensive reference provides veterinarians with everything they need to know about performing surgeries such as spaying and neutering in busy animal shelters. It includes surgical and anesthetic techniques, perioperative procedures, reproductive medicine, and program management regarding dogs, cats, rabbits, and other small mammals. With more than 550 full-color images, High-Quality, High-Volume Spay and Neuter and Other Shelter Surgeries provides spay-neuter and shelter veterinarians with information on the most current clinical techniques. Dozens of veterinary experts offer their expert advice and knowledge on perioperative care, surgery instrumentation, infectious disease control, anesthesia protocols, CPR, the fundamentals of HQHVSN, and more. Covers all aspects of common shelter surgeries, including surgical and anesthetic techniques, perioperative procedures, reproductive medicine, and program management Provides coverage of dogs, cats, rabbits, and other small mammals Written by leaders in the field with experience in surgery, medicine, spay-neuter practice, teaching, and research High-Quality, High-Volume Spay and Neuter and Other Shelter Surgeries is an excellent resource for veterinarians, veterinary technicians, and students, as well as clinic and shelter owners.

Confidently utilize the rapidly growing selection of pharmaceuticals used to treat small animals. Small Animal Pharmacology and

Therapeutics, 2nd Edition helps you understand both the therapeutic uses of common pharmaceuticals and the pharmacology behind them, giving you all of the information you need to design and modify dosing regimens, identify factors that cause drugs to fail, and anticipate adverse drug reactions. Comprehensive approach emphasizes the use of drugs for prevention as well as treatment. Clear, consistent organization makes it easy to find the information you need when you need it. Dosage tables help you find essential pharmaceutical information at a glance. Pharmacogenetics chapter helps you understand how to use this emerging science to find the right dose for each patient, optimizing efficiency and minimizing toxicity. Routes of administration and sample pharmaceutical calculations provide fast, efficient access to comprehensive drug administration all in one inclusive resource. Multiple chapters on Antimicrobial Drugs and Antimicrobial Therapy highlight the impact of antimicrobial resistance on current practice.

The human–animal bond has evolved and diversified down the ages. Dogs, cats and even horses, have long fulfilled the role of faithful companion and indeed, as exemplified by the introduction of seeing and hearing dogs, there may be a critical level of co-dependency between the species. In the twenty-first century, the animal types that are kept as pets in many parts of the world are extensive ranging from reptiles through rodents to ruminants and beyond. As would be predicted by the nature of the relationship, the approach to treatment of a companion animal is often closely aligned to that which would have been offered to their owner. However, an increasing awareness of welfare issues, such as the recognition that animals experience pain and the proven benefits of disease prevention in intensive farming units, together with the growth in zoos and wildlife parks, has increased the likelihood of food producing and non-domesticated animals receiving medicinal products during their life-time. Although many of the individual drugs or classes of drugs administered to animals are the same as, or derived from, those given to man, the safe and effective use of drugs in animals often cannot be achieved by simply transposing knowledge of drug action on, or behaviour in, the body from one species to another. The impact of the anatomical, physiological and pathophysiological variability that spans the animal kingdom can often profoundly alter drug response.

The goal of the Brief is to summarize the state of the art on the chemical safety issues currently concerning meat and poultry, and to discuss the current international legislation on the tools available for their control. The Brief will review the analytical controls and instrumentation available for the control of residues of growth promoters, antibiotics, and any other environmental substances in raw meat and poultry. In addition, there will be a discussion of both the substances that may be generated as a consequence of processing, and the tools that are available for their control. These substances may be quite varied in nature; they may include, for example, the heterocyclic amines generated by heating, the nitrosamines sometimes present in cured meats with nitrite if not properly processed, the polycyclic aromatic hydrocarbons that can be generated depending on the type of smoking used, or the biogenic amines that can be generated during fermentation. Finally, the controls for the detection of foreign proteins (e.g., whey proteins) in the final products will be also compiled. The Brief will conclude with a view of future trends and key references for readers interested in learning more about this topic.

Laboratory Animal Medicine is a compilation of papers that deals with the diseases and biology of major species of animals used in medical research. The book discusses animal medicine, experimental methods and techniques, design and management of

animal facilities, and legislation on laboratory animals. Several papers discuss the biology and diseases of mice, hamsters, guinea pigs, and rabbits. Another paper addresses the dog and cat as laboratory animals, including sourcing of these animals, housing, feeding, and their nutritional needs, as well as breeding and colony management. The book also describes ungulates as laboratory animals, including topics on sourcing, husbandry, preventive medical treatments, and housing facilities. One paper addresses primates as test animals, covering the biology and diseases of old world primates, Cebidae, and ferrets. Some papers pertain to the treatment, diseases, and needed facilities for birds, amphibians, and fish. Other papers then deal with techniques of experimentation, anesthesia, euthanasia, and some factors (spontaneous diseases) that complicate animal research. The text can prove helpful for scientists, clinical assistants, and researchers whose work involves laboratory animals.

The proceedings of the 14th ASTM Symposium on [title], held in San Francisco, April 1990, comprise 26 peer-reviewed papers in the areas of: the Animal Welfare Act, biomarkers, risk assessment, toxicant reduction strategies, carcinogenesis, bioconcentration, toxicity evaluation, organ system toxicology

Advances in Agronomy continues to be recognized as a leading reference and a first-rate source for the latest research in agronomy. As always, the subjects covered are varied and exemplary of the myriad of subject matter dealt with by this long-running serial. Maintains the highest impact factor among serial publications in agriculture. Presents timely reviews on important agronomy issues. Enjoys a long-standing reputation for excellence in the field.

First multi-year cumulation covers six years: 1965-70.

This Detailed Review Paper (DRP) is intended to provide the current state-of-the-knowledge in the area of fish screening assays for chemicals active at the endocrine level on the reproductive system of test animals.

Bringing together a globally diverse range of timely topics related to zoo and wild animals, Fowler's Zoo and Wild Animal Medicine, Volume 9 is an invaluable tool for any professional working directly with wildlife and zoo animals. The text's user-friendly format guides readers through biology, anatomy, and special physiology; reproduction; restraint and handling; housing requirements; nutrition and feeding; surgery and anesthesia; diagnostics, and therapeutics for each animal. Two new co-editors and a globally diverse group of expert contributors each lend their expertise on a wide range of new topics — including a new section on emerging wildlife diseases covering topics like MERS, Equine Herpesvirus, and Ebola in great apes. Other new topics integrated into this ninth volume include: stem cell therapy in zoo medicine, cardiac disease in great apes, disease risk assessment in field studies, Tasmanian devil tumors, and the latest information on the elephant herpes virus. With all its synthesized coverage of emerging trends, treatment protocols, and diagnostic updates new to the field, Fowler's is a reference you don't want to be without. Current therapy format ensures that each CT volume in the series covers all new topics that are relevant at the time of publication. Synthesized topics offer the right amount of depth — often fewer than 10 pages — to maintain an accessible format. General taxon-

based format covers all terrestrial vertebrate taxa plus selected topics on aquatic and invertebrate taxa. Updated information from the Zoological Information Management System (ZIMS) has been incorporated to keep readers up to date on this worldwide system. Globally diverse panel of expert contributors each incorporate the latest research and clinical management of captive and free-ranging wild animals throughout the world. NEW! Two new co-editors (for a total of three editors) each lend their expertise on a wide range of new wild and zoo animal topics. NEW! Section on emerging wildlife diseases includes chapters on MERS, SARS, Ebola in great apes, and a variety of other emerging wildlife diseases.

In the wake of the invitation by InTech, this book was written by a number of prominent researchers in the field. It is set to present a compendium of all necessary and up-to-date data to all who are interested. Schistosomiasis or blood fluke disease, also known as Bilharziasis, is a parasitic disease caused by helminths from a genus of trematodes entitled *Schistosoma*. It is a snail-borne trematode infection. The disease is among the Neglected Tropical Diseases, catalogued by the Global Plan to combat Neglected Tropical Diseases, 2008-2015 and is considered by the World Health Organization (WHO) to be the second most socioeconomically devastating parasitic disease, next to malaria. WHO demonstrates that schistosomiasis affects at least 200 million people worldwide, more than 700 million people live in endemic areas, and more than 200,000 deaths are reported annually. It leads to the loss of about 4.5 million disability-adjusted life years (DALYs).

Veterinary Pharmacology and Therapeutics, Tenth Edition is a fully updated and revised version of the gold-standard reference on the use of drug therapy in all major veterinary species. Provides current, detailed information on using drug therapies in all major domestic animal species Organized logically by drug class and treatment indication, with exhaustive information on the rational use of drugs in veterinary medicine Includes extensive tables of pharmacokinetic data, products available, and dosage regimens Adds new chapters on pharmaceuticals, ophthalmic pharmacology, food animal pharmacology, and aquatic animal pharmacology Includes access to a companion website with the figures from the book in PowerPoint

This book contains the total of 19 chapters, each of which is written by one or several experts in the corresponding field. The objective of this book is to provide a comprehensive and most updated overview of the human placenta, including current advances and future directions in the early detection, recognition, and management of placental abnormalities as well as the most common placental structure and functions, abnormalities, toxicology, infections, and pathologies. It also includes a highly controversial topic, therapeutic applications of the human placenta. A collection of articles presented by active investigators provides a clear update in the area of placental research for medical students, nurse practitioners,

practicing clinicians, and biomedical researchers in the fields of obstetrics, pediatrics, family practice, genetics, and others who may be interested in human placentas.

An insightful exploration of the key aspects concerning the chemical analysis of antibiotic residues in food The presence of excess residues from frequent antibiotic use in animals is not only illegal, but can pose serious health risks by contaminating products for human consumption such as meat and milk. *Chemical Analysis of Antibiotic Residues in Food* is a single-source reference for readers interested in the development of analytical methods for analyzing antibiotic residues in food. It covers themes that include quality assurance and quality control, antibiotic chemical properties, pharmacokinetics, metabolism, distribution, food safety regulations, and chemical analysis. In addition, the material presented includes background information valuable for understanding the choice of marker residue and target animal tissue to use for regulatory analysis. This comprehensive reference: Includes topics on general issues related to screening and confirmatory methods Presents updated information on food safety regulation based on routine screening and confirmatory methods, especially LC-MS Provides general guidance for method development, validation, and estimation of measurement uncertainty *Chemical Analysis of Antibiotic Residues in Food* is written and organized with a balance between practical use and theory to provide laboratories with a solid and reliable reference on antibiotic residue analysis. Thorough coverage elicits the latest scientific findings to assist the ongoing efforts toward refining analytical methods for producing safe foods of animal origin.

Peptic ulcer disease is one of the most common chronic infections in human population. Despite centuries of study, it still troubles a lot of people, especially in the third world countries, and it can lead to other more serious complications such as cancers or even to death sometimes. This book is a snapshot of the current view of peptic ulcer disease. It includes 5 sections and 25 chapters contributed by researchers from 15 countries spread out in Africa, Asia, Europe, North America and South America. It covers the causes of the disease, epidemiology, pathophysiology, molecular-cellular mechanisms, clinical care, and alternative medicine. Each chapter provides a unique view. The book is not only for professionals, but also suitable for regular readers at all levels. A comprehensive introduction to the role of epidemiology in veterinary medicine This fully revised and expanded edition of *Veterinary Epidemiology* introduces readers to the field of veterinary epidemiology. The new edition also adds new chapters on the design of observational studies, validity in epidemiological studies, systematic reviews, and statistical modelling, to deliver more advanced material. This updated edition begins by offering an historical perspective on the development of veterinary medicine. It then addresses the full scope of epidemiology, with chapters covering causality, disease occurrence, determinants, disease patterns, disease ecology, and much more. *Veterinary Epidemiology, Fourth Edition*: ? Features updates of all chapters to provide a current resource on the subject of veterinary epidemiology ? Presents new chapters essential to the continued advancement of the field ? Includes examples from companion animal, livestock, and avian medicine, as well as aquatic animal diseases ?

Focuses on the principles and concepts of epidemiology, surveillance, and diagnostic-test validation and performance ? Includes access to a companion website providing multiple choice questions Veterinary Epidemiology is an invaluable reference for veterinary general practitioners, government veterinarians, agricultural economists, and members of other disciplines interested in animal disease. It is also essential reading for epidemiology students at both the undergraduate and postgraduate levels.

Ethnopharmacology is a component of Encyclopedia of Biological, Physiological and Health Sciences in the global Encyclopedia of Life Support Systems (EOLSS), which is an integrated compendium of twenty one Encyclopedias. Ethnopharmacology is the scientific study correlating ethnic groups, their health, and how it relates to their physical habits and methodology in creating and using medicines. This Theme on Ethnopharmacology presents the field as an amalgam of perspectives, primarily those of pharmacology, pharmacognosy, anthropology, and botany. It highlights the uniquely biocultural perspective on ethnopharmacology offered by medical anthropology, which underscores that health and healing are culturally constructed and socially negotiated. The definition of ethnopharmacology that frames this volume is: the study of indigenous medical systems that connects the ethnography of health and healing with the physiological relevance of its medical practices. The history of botanical medicines is traced from primate self-medication to contributions to biomedicine. The methods of ethnopharmacologic inquiry are presented from pharmacologic, ecological, ethnographic, data management, and ethical perspectives. Chapters are devoted to plants used in the treatment of specific disorders: cancer, parasitic infection, AIDS, inflammation, diabetes, and cardiovascular and neurodegenerative disorders. The important role that plant medicines play in the developing world is revealed in discussion of ritual and ceremony, safety issues, health care, and biodiversity. These two volumes are aimed at the following a wide spectrum of audiences from the merely curious to those seeking in-depth knowledge: University and College students Educators, Professional practitioners, Research personnel and Policy analysts, managers, and decision makers and NGOs.

Techniques in the Behavioral and Neural Sciences, Volume 12: Neglected Factors in Pharmacology and Neuroscience Research: Biopharmaceutics, Animal Characteristics, Maintenance, Testing Conditions can be used as reference in the improvement of test designs for biochemists and physiologists in the control of test conditions. The book is divided into five sections. The introduction deals with the uncertainty of animal characteristics and test conditions as hindrances to the development of general insight into biological regulatory mechanism. The first section discusses biopharmaceutics — the interaction of drugs when interacting with molecules or enzymes in sufficient concentration at a specific site of action. The second section reviews animal characteristics in terms of strain differences, sex differences, and changes during development and aging of the subject. The third section discusses the maintenance of experimental animals such as housing conditions, food composition, and water intake as these kinds of environmental factors may shape the phenotype and responsiveness of the experimental animal. The fourth section explains the testing conditions such as metabolic effects and drug interactions, anesthesia, stress, and even the effects on circadian rhythms. The last section is a discussion on the importance of experimental results. This section covers internal and external validities and statistical inference. The author concludes that the design of any experiment should include a power analysis so that reliable and

valuable conclusions can follow. Biochemists, physiologists, pharmacokineticists, toxicologists, chemical researchers, and others for whom drugs are their main focus of study will find this book valuable.

The major objective of this handbook is to compile-in tabular form-the pharmacokinetic parameters of antimicrobial drugs used in food animals. This unique publication represents data from the FARAD (Food Animal Residue Avoidance Databank) databank, established by the authors under the auspices of the U.S.D.A. and contains significant amounts of previously unavailable information. This updated, one-of-a-kind volume even features additional data on laboratory rodents, dogs, cats, and horses in order to facilitate broader interspecies extrapolations. This easy-to-use reference is timely as well as invaluable to animal scientists, veterinarians, pharmacologists, and toxicologists who work with antimicrobials in chickens, turkeys, dairy and beef cattle, swine, goats, and sheep.

[Copyright: f9ae51e845a9b51a89ed96525d4912dc](#)