

Swine In The Laboratory Surgery Anesthesia Imaging And Experimental Techniques Second Edition

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Veterinary Anaesthesia E-Book Kathy W. Clarke 2013-06-28 This is a fully revised new edition of this essential text covering anaesthesia and analgesia in all large and small animal species. The new edition has greatly expanded sections on anaesthesia of exotic species such as small mammals, llamas, camels and many more, and also has a new section on anaesthesia of wild animals, both large and small, and birds. The book is divided into 3 sections; the first, Principles and Procedures covers pharmacology and pharmacokinetics, monitoring, sedation and premedication and much more. The second section comprises chapters on anaesthesia in all the main species and the third section covers anaesthesia in special cases, complications and crises ! Almost 200 prints and line illustrations enhance the comprehensive text, and make the new edition of Veterinary Anaesthesia 10/e an essential purchase for all vets ! all large and small animal species covered in one book: includes new advances in anaesthesia in horses, birds, lab animals and wild animals glossary of USA and UK drug names: up-dated coverage of all new anaesthetic agents in Europe and the USA first section covers principles of drug action, pharmacokinetics and pharmacodynamics the only book to discuss anaesthesia of individual species in detail: lot of info on anaesthesia of goats, sheep and other herbivores such as camels and llamas also covers analgesia in all species chapter on special cases such as anaesthesia in obstetrics chapter on anaesthetic accidents and crises ! the new edition will be made more student-friendly by adding special boxes in the text which will be relevant for this group. Full revision and update of content

Anesthesia and Analgesia in Laboratory Animals Richard Fish 2011-04-28 Anesthesia and Analgesia in Laboratory Animals focuses on the special anesthetic, analgesic, and postoperative care requirements associated with experimental surgery. Fully revised and updated this new edition provides the reader with agents, methods, and techniques for anesthesia and analgesia that ensure humane and successful procedural outcomes. * Provides researchers with the most comprehensive and up-to-date review of the use of anesthesia and analgesia in laboratory animals * Thoroughly updated with new material on ferrets, birds, reptiles, amphibians, fish, and invertebrates * Includes hot topic areas such as pain research, ethical issues, legal issues, and imaging studies

Laboratory Animal Medicine Lynn C. Anderson 2015-07-04 Laboratory Animal Medicine, Third Edition, is a fully revised publication from the American College of Laboratory Medicine's acclaimed blue book series. It presents an up-to-date volume that offers the most thorough coverage of the biology, health, and care of laboratory animals. The book is organized by species, with new inclusions of chinchillas, birds, and program and employee management, and is written and edited by known experts in the fields. Users will find gold-standard guidance on the study of laboratory animal science, as well as valuable information that applies across all of the biological and biomedical sciences that work with animals. Organized by species for in-depth understanding of biology, health, and best care of animals Features the inclusion of chinchillas, quail, and zebra finches as animal models Offers guidance on program and employee management Covers regulations, policies, and laws for laboratory animal management worldwide

The Minipig in Biomedical Research Peter A. McNulty 2011-12-19 The Minipig in Biomedical Research is a comprehensive resource for research scientists on the potential and use of the minipig in basic and applied biomedical research, and the development of drugs and chemicals. Written by acknowledged experts in the field, and drawing on the authors' global contacts and experience with regulatory authorities and the pharmaceutical and other industries, this accessible manual ranges widely over the biological, scientific, and practical uses of the minipig in the laboratory. Its coverage extends from the minipig's origins, anatomy, genetics, immunology, and physiology to its welfare, health, and husbandry; practical dosing and examination procedures; surgical techniques; and all areas of toxicity testing and the uses of the minipig as a disease model. Regulatory aspects of its use are considered. The reader will find an extensive amount of theoretical and practical information in the pharmacology; ADME and toxicology chapters which will help scientists and managers when deciding which species to use in basic research; drug discovery and pharmacology; and toxicology studies of chemicals, biotechnology products and devices. The book discusses regulatory uses of minipigs in the evaluation of human and veterinary pharmaceuticals, medical devices, and other classes of xenobiotics. It describes features of normal health, normal laboratory values, and common diseases. It also carefully elucidates ethical and legal considerations in their supply, housing, and transport. The result is an all-inclusive and up to date manual about the experimental uses of the minipig that describes 'How to' and 'Why' and 'What to expect in the normal', combining enthusiasm and experience with critical assessment of its values and potential problems.

Sedation and Anesthesia of Zoological Companion Animals, An Issue of Veterinary Clinics of North America: Exotic Animal Practice, E-Book João Brandão 2021-12-01 In this issue of Veterinary Clinics: Exotic Animal Practice, Guest Editor Alexander M. Reiter brings his considerable expertise to the topic of sedation and anesthesia of zoological companion animals. Top experts in the field cover key topics such as sedation and anesthesia in fish, amphibians, chelonians, lizards, snakes, and more. Provides in-depth, clinical reviews on sedation and anesthesia of zoological companion animals, providing actionable insights for clinical practice. Presents the latest information on this timely, focused topic under the leadership of experienced editors in the field; Authors synthesize and distill the latest research and practice guidelines to create these timely topic-based reviews. Contains 15 relevant, practice-oriented topics including drug delivery and safety considerations; nerve blocks in zoological companion animals; and more.

Behavioral Biology of Laboratory Animals Kristine Coleman 2021-09-01 This 30-chapter volume informs students and professionals about the behavioral biology of animals commonly housed in laboratory and other captive settings. Each species evolved under specific environmental conditions, resulting in unique behavioral patterns, many of which are maintained in captivity even after generations of breeding. Understanding natural behavior is therefore a critical part of modern animal care practices. The descriptions, data, guidance, resources, and recommendations in this book will help the reader understand their animals better, refine the care and treatment that they receive, and improve the well-being, welfare, and wellness of their animals. The book is divided into three sections, all focusing on aspects of the behavioral biology of animals found in laboratories and related research settings. After five introductory chapters, 25 chapters are dedicated to specific taxonomic groups (including mice, zebrafish, zebra finches, reptiles, macaques) while a concluding section of ethograms provides a centralized resource for those interested in understanding, and potentially quantifying, animal behavior. The Behavioral Biology of Laboratory Animals will provide anyone working in maintenance, care, and/or research programs that involve laboratory animals with information about the way the animals live in the wild, and the way that they should live in captive research settings. Many of the guidelines and recommendations will also be valuable to those managing and working with animals in other environments, including zoological parks, aquaria, and sanctuaries.

Handbook of Laboratory Animal Science Jann Hau 2021-05-17 Building upon the success of previous editions of the bestselling Handbook of Laboratory Animal Science, first published in 1994, this latest revision combines all three volumes in one definitive guide. It covers the essential principles and practices of Laboratory Animal Science as well as selected animal models in scientific disciplines where much progress has been made in recent years. Each individual chapter focuses on an important subsdiscipline of laboratory animal science, and the chapters can be read and used as stand-alone texts, with only limited necessity to consult other chapters for information. With new contributors at the forefront of their fields, the book reflects the scientific and technological advances of the past decade. It also responds to advances in our understanding of animal behavior, emphasizing the importance of implementing the three Rs: replacing live animals with alternative methods, reducing the number of animals used, and refining techniques to minimize animal discomfort. This fourth edition will be useful all over the world as a textbook for laboratory animal science courses for postgraduate and undergraduate students and as a handbook for scientists who work with animals in their research, for university veterinarians, and for other specialists in laboratory animal science.

Anesthesia Brian A. Hall 1997 A unique review reference featuring nearly 1,000 multiple choice questions. Each question focuses on a key concept or anesthesia problem encountered in daily practice. Answers, explanations, case analyses and references follow, making the information relevant to patient care and standard procedures.

Clinical Laboratory Animal Medicine Lesley A. Colby 2019-12-05 The revised fifth edition of Clinical Laboratory Animal Medicine: An Introduction is an accessible guide to basic information for conducting animal research safely and responsibly. It includes a review of the unique anatomic and physiologic characteristics of laboratory animals, husbandry practices, and veterinary care of many animals frequently used in research, including rodents, rabbits, ferrets, zebrafish, nonhuman primates, and agricultural animals. The updated fifth edition adds two new chapters on zebrafish and large animals, new information on transgenic models and genetic editing, and expanded coverage of environmental enrichment and pain management. The book presents helpful tip boxes, images, and review questions to aid in comprehension and learning, and a companion website provides editable review questions and answers, instructional PowerPoints, and additional images not found in the book. This important text: • Provides a complete introduction to laboratory animal husbandry, diseases, and treatments • Offers a user-friendly format with helpful content that highlights important concepts • Contains new knowledge relating to technical methodologies, diseases, drug dosages, laws and regulations, and organizations • Covers information on regulations, facilities, equipment, housing, and research variables as well as veterinary care • Includes new chapters on zebrafish and cattle, sheep, goats, and pigs Written for veterinary technicians, veterinary students, practicing veterinarians, and research scientists, the fifth edition of Clinical Laboratory Animal Medicine continues to offer an essential guide to the ethical treatment and anatomic and physiological characteristics of research animals.

Management of Animal Care and Use Programs in Research, Education, and Testing Robert H. Weichbrod 2017-09-07 AAP Prose Award Finalist 2018/19 Management of Animal Care and Use Programs in Research, Education, and Testing, Second Edition is the extensively expanded revision of the popular Management of Laboratory Animal Care and Use Programs book published earlier this century. Following in the footsteps of the first edition, this revision serves as a first line management resource, providing for strong advocacy for advancing quality animal welfare and science worldwide, and continues as a valuable seminal reference for those engaged in all types of programs involving animal care and use. The new edition has more than doubled the number of chapters in the original volume to present a more comprehensive overview of the current breadth and depth of the field with applicability to an international audience. Readers are provided with the latest information and resource and reference material from authors who are noted experts in their field. The book: - Emphasizes the importance of developing a collaborative culture of care within an animal care and use program and provides information about how behavioral management through animal training can play an integral role in a veterinary health program - Provides a new section on Environment and Housing, containing chapters that focus on management considerations of housing and enrichment delineated by species - Expands coverage of regulatory oversight and compliance, assessment, and assurance issues and processes, including a greater discussion of globalization and harmonizing cultural and regulatory issues - Includes more in-depth treatment throughout the book of critical topics in program management, physical plant, animal health, and husbandry. Biomedical research using animals requires administrators and managers who are knowledgeable and highly skilled. They must adapt to the complexity of rapidly-changing technologies, balance research goals with a thorough understanding of regulatory requirements and guidelines, and know how to work with a multi-generational, multi-cultural workforce. This book is the ideal resource for these professionals. It also serves as an indispensable resource text for certification exams and credentialing boards for a multitude of professional societies Co-publishers on the second edition are: ACLAM (American College of Laboratory Animal Medicine); ECLAM (European College of Laboratory Animal Medicine); IACLAM (International Colleges of Laboratory Animal Medicine); JCLAM (Japanese College of Laboratory Animal Medicine); KCLAM (Korean College of Laboratory Animal Medicine); CALAS (Canadian Association of Laboratory Animal Medicine); LAMA (Laboratory Animal Management Association); and IAT (Institute of Animal Technology).

Surgery, Anesthesia and Experimental Techniques inSwine M Michael Swindle 1999-02-02 Surgery, Anaesthesia and Experimental Techniques in Swine is the definitive book for surgical procedures performed on swine in research laboratories. It will be an indispensable reference for biomedical researchers as well as laboratory animal veterinarians who use swine in studies on immunology, organ transplantation, hypertension, cardiovascular bypass, congenital heart disease and the like. It describes not only surgical techniques and the use of anaesthesia, but also includes state-of-the-art coverage of techniques such as MRI and angioath imaging. Liberally illustrated with line drawings and photographs, the book focuses on surgical anatomy and surgical approaches, teaching anatomical and surgical features unique to swine.

Sourcebook of Models for Biomedical Research P. Michael Conn 2008 The collection of systems represented in this volume is a unique effort to reflect the diversity and utility of models used in biomedicine. That utility is based on the consideration that observations made in particular organisms will provide insight into the workings of other, more complex systems. This volume is therefore a comprehensive and extensive collection of these important medical parallels. **Experimental Surgical Models in the Laboratory Rat** Alfredo Rigalli 2016-04-19 An All-Inclusive Guide to Surgical Techniques on RatsThe design of an adequate surgical model, like the choice of the animal model itself, is extremely important for obtaining reliable valuable data. Experimental Surgical Models in the Laboratory Rat summarizes a series of techniques that were applied in the Bone Biology Laboratories, School of Med

Biomaterials Science Buddy D. Ratner 2012-12-31 The revised edition of this renowned and bestselling title is the most comprehensive single text on all aspects of biomaterials science. It provides a balanced, insightful approach to both the learning of the science and technology of biomaterials and acts as the key reference for practitioners who are involved in the applications of materials in medicine. Over 29,000 copies sold, this is the most comprehensive coverage of principles and applications of all classes of biomaterials: "the only such text that currently covers this area comprehensively" - Materials Today Edited by four of the best-known figures in the biomaterials field today; fully endorsed and supported by the Society for Biomaterials Fully revised and expanded, key new topics include of tissue engineering, drug delivery systems, and new clinical applications, with new teaching and learning material throughout, case studies and a downloadable image bank

Pathology of Laboratory Rodents and Rabbits Stephen W. Barthold 2016-01-04 Now in its fourth edition, Pathology of Laboratory Rodents and Rabbits has become a standard text for veterinary pathologists, laboratory animal veterinarians, students, and others interested in these species. • The standard reference on the pathogenesis and cardinal diagnostic features of diseases of mice, rats, hamsters, gerbils, guinea pigs, and rabbits • Expanded coverage of rabbit disease, normal anatomic features, and biology • Over 450 color photographs illustrating gross and microscopic pathology • Companion website offering images from the text in PowerPoint

In Vivo Imaging in Pharmacological Research Nicolau Beckmann 2017-08-08 The discovery and development of a biological active molecule with therapeutic properties is an ever increasing complex task, highly unpredictable at the early stages and marked, in the end, by high rates of failure. As a consequence, the overall process leading to the production of a successful drug is very costly. The improvement of the net outcome in drug discovery and development would require, amongst other important factors, a good understanding of the molecular events that characterize the disease or pathology in order to better identify likely targets of interest, to optimize the interaction of an active agent (small molecule or macromolecule of natural or synthetic origin) with those targets, and to facilitate the study of the pharmacokinetics, pharmacodynamics and toxicity of an active agent in suitable models and in human subjects. The objective of this Research Topic is to highlight new developments and applications of imaging techniques with the objective of performing pharmacological studies in vivo, in animal models and in humans. In the domain of drug discovery, the pharmacological and biomedical questions constitute the center of attention. In this sense, it is fundamental to keep in mind the strengths and limitations of each analytical or imaging technique. At the end, the judicious application of the technique with the aim of supporting the search for answers to manifold questions arising during a long and painstaking path provides a continuous role for imaging within the complex area of drug discovery and development.

Veterinary Anesthesia and Analgesia Kurt A. Grimm 2015-05-11 Veterinary Anesthesia and Analgesia: the Fifth Edition of Lumb and Jones is a reorganized and updated edition of the gold-standard reference for anesthesia and pain management in veterinary patients. Provides a thoroughly updated edition of this comprehensive reference on veterinary anesthesia and analgesia, combining state-of-the-art scientific knowledge and clinically relevant information Covers immobilization, sedation, anesthesia, and analgesia of companion, wild, zoo, and laboratory animals Takes a body systems approach for easier reference to information about anesthetizing patients with existing conditions Adds 10 completely new chapters with in-depth discussions of perioperative heat balance, coagulation disorders, pacemaker implantation, cardiac output measurement, cardiopulmonary bypass, shelter anesthesia and pain management, anesthetic risk assessment, principles of anesthetic pharmacology, and more Now printed in color, with more than 400 images

Guidelines for the Care and Use of Mammals in Neuroscience and Behavioral Research National Research Council 2003-08-22 Expanding on the National Research Council's™ Guide for the Care and Use of Laboratory Animals, this book deals specifically with mammals in neuroscience and behavioral research laboratories. It offers flexible guidelines for the care of these animals, and guidance on adapting these guidelines to various situations without hindering the research process. Guidelines for the Care and Use of Mammals in Neuroscience and Behavioral Research offers a more in-depth treatment of concerns specific to these disciplines than any previous guide on animal care and use. It treats on such important subjects as: The important role that the researcher and veterinarian play in developing animal protocols. Methods for assessing and ensuring an animal's™ well-being. General animal-care elements as they apply to neuroscience and behavioral research, and common animal welfare challenges this research can pose. The use of professional judgment and careful interpretation of regulations and guidelines to develop performance standards ensuring animal well-being and high-quality research. Guidelines for the Care and Use of Mammals in Neuroscience and Behavioral Research treats the development and evaluation of animal-use protocols as a decision-making process, not just a decision. To this end, it presents the most current, in-depth information about the best practices for animal care and use, as they pertain to the intricacies of neuroscience and behavioral research.

The Laboratory Swine, Second Edition Peter J. A. Bollen 2010-02-22 Since the popular first edition was published more than a decade ago, the number of swine used in toxicity studies has increased as an alternative to commonly used non-rodent species, such as dogs and primates. A volume in the Laboratory Animal Pocket Reference Series, The Laboratory Swine, Second Edition maintains the high standard set by the previous edition and is poised to continue its legacy as the premier laboratory reference on the care and use of swine in the laboratory. Emphasizes Humane Care and Use of Laboratory Swine Addressing the biology, husbandry, management, veterinary care and research applications of both large and miniature swine, this color reference is a complete source of information on the species. It is thoroughly updated and includes a major revision to the anesthetics section. It also places a heightened focus on animal welfare and addresses important considerations related to genetically modified swine. The book is divided into six parts: Important Biological Features examines everything from different breeds and behavior, to anatomical and physiological features, as well as digestive, cardiovascular, and pulmonary systems Husbandry addresses housing, nutrition, sanitation, transportation, and more Management and Quality Assurance looks at the impact of infections on animal research using swine, zoonotic diseases, legal regulations, genetic monitoring, and more Veterinary Care covers a variety of topics, such as clinical examination, diseases, pain recognition, and post-operative management Experimental Techniques addresses restraint, sampling techniques, basic surgical procedures, and other issues Resources provides extensive references for further study, including handbooks, journals, and websites The Laboratory Swine, Second Edition is ideal for animal caretakers, technicians, investigators, and laboratory animal veterinarians as a single-source reference that contributes to the humane care and use of swine in research.

Mycoplasmas in Swine Dominiek Maes 2021-03-12 Swine can be infected with many different mycoplasmas. Some are important pathogens, causing significant health and welfare issues in pigs and major losses to the swine industry worldwide. Other mycoplasmas are not pathogenic for swine and can be considered commensals. This book provides up-to-date scientific, clinical and practical information of the most important pathogenic mycoplasmas in swine. Most emphasis has been placed on Mycoplasma hyopneumoniae as the most economically important, but other pathogenic species like Mycoplasma hyorhinis, Mycoplasma hyosynoviae and Mycoplasma suis are also discussed. Written by internationally renowned scientists and clinicians from all over the world, this book draws together in depth knowledge, expertise and experience in swine mycoplasmas to provide an evidence-based, academically rigorous and practical collection. It aims to serve the scientific and veterinary community and the swine industry worldwide.

Biology and Diseases of the Ferret James G. Fox 2014-03-26 Biology and Diseases of the Ferret, Third Edition has been thoroughly revised and updated to provide a current, comprehensive reference on the ferret. Encyclopedic in scope, it is the only book to focus on the characteristics that make the ferret an important research animal, with detailed information on conditions, procedures, and treatments. Offering basic information on biology, husbandry, clinical medicine, and surgery, as well as unique information on the use of ferrets in biomedical research, Biology and Diseases of the Ferret is an essential resource for investigators using ferrets in the laboratory and for companion animal and comparative medicine veterinarians. The Third Edition adds ten completely new chapters, covering regulatory considerations, black-footed ferret recovery, diseases of the cardiovascular system, viral respiratory disease research, morbillivirus research, genetic engineering, hearing and auditory function, vision and neuroplasticity research, nausea and vomiting research, and lung carcinogenesis research. Additionally, the anesthesia, surgery, and biotechnology chapter has been subdivided into three and thoroughly expanded. The book also highlights the ferret genome project, along with the emerging technology of genetically engineered ferrets, which is of particular importance to the future of the ferret as an animal model in research and will allow the investigation of diseases and their genetic basis in a small, easily maintained, non-rodent species.

Veterinary Reproductive Ultrasonography Wolfgang Kähn 2004-03-22 A guide to the reproductive problems facing the busy veterinary practitioner in every day practice. The pregnant and non-pregnant uterus, as well as pathologic changes of the reproductive system are described and explained. The book is superbly illustrated and covers all the important domestic large and small animals: dogs, cats, horses, cows, sheep, goats and pigs.

Guide for the Care and Use of Laboratory Animals National Research Council 2011-01-27 A respected resource for decades, the Guide for the Care and Use of Laboratory Animals has been updated by a committee of experts, taking into consideration input from the scientific and laboratory animal communities and the public at large. The Guide incorporates new scientific information on common laboratory animals, including aquatic species, and includes extensive references. It is organized around major components of animal use: Key concepts of animal care and use. The Guide sets the framework for the humane care and use of laboratory animals. Animal care and use program. The Guide discusses the concept of a broad Program of Animal Care and Use, including roles and responsibilities of the Institutional Official, Attending Veterinarian and the Institutional Animal Care and Use Committee. Animal environment, husbandry, and management. A chapter on this topic is now divided into sections on terrestrial and aquatic animals and provides recommendations for housing and environment, husbandry, behavioral and population management, and more. Veterinary care. The Guide discusses veterinary care and the responsibilities of the Attending Veterinarian. It includes recommendations on animal procurement and transportation, preventive medicine (including animal biosecurity), and clinical care and management. The Guide addresses distress and pain recognition and relief, and issues surrounding euthanasia. Physical plant. The Guide identifies design issues, providing construction guidelines for functional areas; considerations such as drainage, vibration and noise control, and environmental monitoring; and specialized facilities for animal housing and research needs. The Guide for the Care and Use of Laboratory Animals provides a framework for the judgments required in the management of animal facilities. This updated and expanded resource of proven value will be important to scientists and researchers, veterinarians, animal care personnel, facilities managers, institutional administrators, policy makers involved in research issues, and animal welfare advocates.

The Laboratory Rabbit, Second Edition Mark A. Suckow 2010-04-12 With laboratory animals, especially rabbits, playing such an important role in biomedical research, the humane care of these animals is an ongoing concern. The Laboratory Rabbit, Second Edition presents basic information and common procedures in detail to provide a quick reference for caretakers, technicians, and researchers in a laboratory setting. Now in full color, the second edition of this book illustrates management practices and technical procedures with numerous figures and tables. It includes updated tables on anesthetic agents, methods of euthanasia, recommended needle sizes, injection sites, approximate values for injection, and sedative and immobilization agents. Plastic comb-bound for convenient and frequent use, this guide also provides sources and suppliers of additional information on rabbits, feed, and sanitation supplies.

Potbellied Pig Veterinary Medicine - E-Book Kristie Mozzachio 2022-03-03 Comprehensive coverage addresses the essential topics of potbellied pig veterinary care, helping you properly care for these animals within a veterinary practice. Coverage of key aspects of potbellied pig care includes physical examinations, diseases, behavior, husbandry, handling/restraint, surgery, and much more. More than 150 clinical photos show a wide variety of potbellied pigs and treatment scenarios. Enhanced eBook is included with the purchase of a new print copy of the book, providing online access to a fully searchable version of the text and making its content available on various devices. Single-source review provides an all-in-one reference on the care of potbellied pigs. Expert author Kristie Mozzachio has worked with potbellied pigs for more than 25 years, including a mobile veterinary service that specializes in potbellied pigs, and consults both nationally and internationally.

Swine in the Laboratory M. Michael Swindle 2007-03-22 To diminish the learning curve associated with using swine as models, Swine in the Laboratory: Surgery, Anesthesia, Imaging, and Experimental Techniques, Second Edition provides practical technical information for the use of swine in biomedical research. The book focuses on models produced by surgical and other invasive procedures, supplying the ba

Handbook of Pig Medicine Peter G. G. Jackson 2007 Filling a much needed place in veterinary medicine, Handbook of Pig Medicine provides the knowledge needed to recognize, diagnose, treat and control pig diseases in practice. The book includes high quality illustrations which, where appropriate, complement written descriptions of clinical signs. It deals with medical, surgical and reproductive problems in pigs. Clinical examination of the individual pig and the investigation of herd problems are covered in detail, along with a study on pig population medicine. Each body system is considered with special attention to clinical signs, diagnosis and treatment. Additionally, chapters in the book discuss obstetrics, pig haematology and biochemistry as well as differential diagnosis. Other topics discussed, include organic and outdoor pigs; problems of the pet pig, sampling, euthanasia and post-mortem examination. Written by two experienced clinicians and clinical teachers Succinct, reader-friendly text intended for quick and effective use Over 250 high quality colour illustrations support the text Detailed description of clinical examination of pigs - an essential part of diagnosis Provides students and clinicians with the knowledge and the skills to deal with pig patients effectively

Pig Disease Identification and Diagnosis Guide Steven McOrist 2014-10-31 Pork is one of the world's most widely consumed meats, with the pig industry undergoing recent rapid expansion across Asia and Latin America. This textbook covers more than 100 of the most common pig diseases. With each presented as a case study, the book uses a question and answer format to enable students to recognise the key features of each disease, identify the problem and suggest a course of action. Fully illustrated throughout with colour photos, this is an invaluable learning tool for veterinary, animal science and agricultural students, as well as a useful resource for veterinarians.

Necessity, Use, and Care of Laboratory Dogs at the U.S. Department of Veterans Affairs National Academies of Sciences, Engineering, and Medicine 2020-10-28 For many years, laboratory dogs have served as important animal models for biomedical research that has advanced human health. Conducted at the request of the U.S. Department of Veterans Affairs (VA), this report assesses whether laboratory dogs are or will continue to be necessary for biomedical research related to the VA's mission. The report concludes that using laboratory dogs in research at the VA is scientifically necessary for only a few areas of current biomedical research. The report recommends that the VA adopt an expanded set of criteria for determining when it is scientifically necessary to use laboratory dogs in VA biomedical research; that the VA promote the development and use of alternatives to laboratory dogs; and highlights opportunities for the VA to enhance the welfare of laboratory dogs that are being used in biomedical research areas for which they have been deemed necessary.

Swine in the Laboratory M. Michael Swindle 2015-10-28 For two decades, Swine in the Laboratory: Surgery, Anesthesia, and Experimental Techniques has been the most respected practical technical guide for medical and veterinary

researchers using swine as experimental animals. Extensively updated and expanded since the publication of the second edition in 2007 and now sponsored by the American College of

Laboratory Animal Anaesthesia Paul Flecknell 2009-04-09 Laboratory Animal Anesthesia looks at recent significant developments in anesthetic practices in laboratory experiments involving animals. It also provides information about basic standards for proper use of anesthesia. In addition, it examines the equipment and different anesthetic agents that are used in performing an experiment on animals. The book also discusses the profound effects of anesthesia on the physiological aspect of the animals' body systems, such as hypothermia and respiratory depression. The book addresses the proper management and care that should be provided for the animals that undergo anesthesia. Furthermore, it covers different anesthetic procedures that should be used on various kinds of small animals intended for laboratory experiments. The main goal of this book is to provide information about the different anesthetic agents used in experiments, and the proper standards to follow when using anesthetics on lab animals. • New edition provides new information on anesthesia and analgesia, and has an extensively revised and updated bibliography • Provides a balanced consideration of the needs of scientific research and the welfare of laboratory animals • Written by a veterinary anesthetist and scientist with over 30 years' experience in the field, and who is actively engaged in research in this area • Provides rapid, easily accessed information using tabulated summaries • Provides those with limited experience of anesthesia with the information they need to carry out procedures effectively, safely, and humanely • Provides sufficient depth for the more experienced anesthetist moving to this field

Medicine and Surgery of Camelids Murray Fowler 2011-07-26 Medicine and Surgery of Camelids is the classic comprehensive reference on llamas, alpacas, vicunas, guanacos, and camels. With information on topics ranging from nutrition and management to infectious diseases and emergency care, this book provides information on the health and maintenance of these species. Updates to the Third Edition include new information on camels; full color throughout; significant revisions to the parentage verification, infectious diseases, anesthesia, restraint, and nutrition sections; and additional information on the alpaca genome. This is an essential resource for practicing veterinarians, zoo veterinarians, and veterinary students.

Sustainable Swine Nutrition Lee I. Chiba 2013-02-04 Finding sustainable means of swine nutrition is important to both pork industry personnel and the environment alike. This reference comprehensively covers the most recent advancements in sustainability that results in more efficient diets, thus reducing both production costs and waste. Chapters include information on alternative feedstuffs, feed additives, bioavailability of nutrients, and management of wastes and odors. Written by internationally recognized experts in the field, Sustainable Swine Nutrition will be a valuable reference for those involved in all aspects of pork production. Comprehensively covers the most recent advancements in sustainability to promote reduced pork production costs and waste Covers recent topics such as alternative feedstuffs, feed additives, and bioavailability Discusses environmental topics such as waste and odor management Written by an international team of experts in the field

Advances in Experimental Surgery Paulo N. Martins 2017-11 Experimental surgery is an important link for the development in clinical surgery, research and teaching. Experimental surgery was part of the most important surgical discoveries in the past century. Since 1901 nine Nobel Prizes have been awarded to the pioneers had remarkable achievements in the basic or practical surgery. In recent 20 years, experimental surgery has achieved new advances, like laparoscopic and robotic surgery, tissue engineering, and gene therapy which are widely applied in clinic surgery. The present book covers wide experimental surgery in preclinical research models subdivided in two volumes. Volume I introduces surgical basic notions, techniques, and different surgical models involved in basic experimental surgery and review the biomechanical models, ischemia/reperfusion injury models, repair and regeneration models, and organ and tissue transplantation models, respectively. Volume II introduces several specific experimental models such as laparoscopic and bariatric experimental surgical models. The second volume also introduces graft-versus-host disease, and other experimental models. Review the advances and development of recent techniques such as tissue engineering, organ preservation, wound healing and scarring, gene therapy and robotic surgery. The book documents the enormous volume of knowledge we have acquired in the field of experimental surgery. In this book, we have invited experts from the United States, Canada, France, Germany, China, Japan, Korea, UK, Sweden, Netherland, Hungary and Turkey to contribute 36 chapters in the fields of their expertise. These two volumes are the compilation of basic experimental surgery and updated advances of new development in this field that will be invaluable to surgeons, residents, graduate students, surgical researchers, physicians, immunologists, veterinarians and nurses in surgery.

Mosby's Comprehensive Review for Veterinary Technicians Monica M. Tighe 2003 Written by vet techs for vet techs, this comprehensive review tool offers coverage of basic science, clinical science, diagnostics, applications, and professional areas. It concisely presents a review of the curriculum, starting at the basics learned first and progressing to the advanced concepts learned at the end. A true review format, this book features tools such as chapter outlines, learning outcomes, a glossary, and multiple-choice questions to aid readers' comprehension of material. Concisely covers all areas of veterinary technology, including basic and clinical sciences, applications, patient management, nursing, nutrition, anesthesia and

pharmacology, and professional practices and issues. Written in an easy-to-use outline format with numerous tables to summarize information. Includes coverage of large animals, birds, reptiles, lab animals, cats, and dogs. Features chapter outlines, glossaries, learning outcomes, and review questions for material review. Content is enhanced, reflecting the expanding responsibilities that today's veterinary technicians encounter in genetics, small animal nursing, veterinary dentistry, zoonoses, emergency first aid, avian and reptile medicine, equine and ruminant surgery, anesthesia, and breeding, reproduction, and neonatal care. Features more than 60 new illustrations, including a number of radiographs and cytology slides. Includes chapters on cytology and ethics. Presents a comprehensive review exam with nearly 300 questions. Offers an appendix of resources, including American, Canadian, and International associations, registration of technicians, and internet sites.

Susan L. Fubini 2016-03-01 Master the surgical techniques needed to treat large animals! A comprehensive resource, Farm Animal Surgery, 2nd Edition provides clear, step-by-step guidelines to performing common, field-tested surgical procedures. Coverage includes key information such as patient examination and preparation, diagnostic imaging, surgical procedures by body system, anesthesia concerns, fluid therapy, and postoperative management. Written by large animal specialists Susan Fubini and Norm Ducharme, along with a team of expert contributors, this resource is also an invaluable tool in preparing for ACVS or ECVS board exams. Consistent, logical organization makes it easy to find important information, with each section devoted to a single animal and chapters organized by body system. Step-by-step guidelines cover bovine, sheep and goat, and swine surgeries by body system. 775 full-color photographs and anatomic drawings illustrate common disorders, techniques, and equipment for large animal surgery. Up-to-date information on key surgical techniques keeps you aware of advances in the field and practical knowledge of animal care. 35 expert contributors provide a diverse, authoritative perspective on the many aspects of large animal surgery. References are provided for very specialized procedures. NEW surgical procedures are included for each species — many with illustrated, step-by-step instructions. NEW coverage of the physical examination includes cow, swine, goats, and sheep, to facilitate more accurate diagnoses of medical or surgical conditions.

James G. Fox 2013-10-02 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 Clinical Chemistry of Laboratory Animals David M. Kurtz 2017-10-18 Key features: Serves as the detailed, authoritative source of the clinical chemistry of the most commonly used laboratory animals Includes detailed chapters dedicated to descriptions of clinical chemistry-related topics specific to each laboratory species as well as organ/class-specific chapters Presents information regarding evaluation and interpretation of a variety of individual clinical chemistry end points Concludes with detailed chapters dedicated to descriptions of statistical analyses and biomarker development of clinical chemistry-related topics Provides extensive reference lists at the end of each chapter to facilitate further study Extensively updated and expanded since the publication of Walter F. Loeb and Fred W. Quimby's second edition in 1999, the new The Clinical Chemistry of Laboratory Animals, Third Edition continues as the most comprehensive reference on in vivo animal studies. By organizing the book into species- and organ/class-specific chapters, this book provides information to enable a conceptual understanding of clinical chemistry across laboratory species as well as information on evaluation and interpretation of clinical chemistry data relevant to specific organ systems. Now sponsored by the American College of Laboratory Animal Medicine (ACLAM), this well-respected resource includes chapters on multiple laboratory species and provides pertinent information on their unique physiological characteristics, methods for sample collection, and preanalytical sources of variation for the particular species. Basic methodology for common procedures for each species is also discussed. New Chapters in the Third Edition Include: The Laboratory Zebrafish and Other Fishes Evaluation of Cardiovascular and Pulmonary Function and Injury Evaluation of Skeletal Muscle Function and Injury Evaluation of Bone Function and Injury Vitamins Development of Biomarkers Statistical Methods The Clinical Chemistry of Laboratory Animals, Third Edition is intended as a reference for use by veterinary students, clinical veterinarians, verterinary toxicologists, veterinary clinical pathologists, and laboratory animal veterinarians to aid in study design, collection of samples, and interpretation of clinical chemistry data for laboratory species.

Animal Welfare Information Center Bulletin 2008

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Farm Animal Surgery - E-Book

Laboratory Animal Medicine