

Laboratory Mouse And Laboratory Rat Procedural Techniques Laboratory Mouse Procedural Techniques Manual And Dvd

The Laboratory Rat, Second Edition features updated information on a variety of topics including: rat genetics and genomics, both spontaneous and induced disease; state-of-the-art technology for housing and husbandry; occupational health, and experimental models. A premier source of information on the laboratory rat that will be of interest to veterinary and medical students, senior graduate, graduate students, post-docs and researchers who utilize animals in biomedical research. At least 50% new information than first edition Includes topics on rat genetics and genomics, occupational health, and experimental models The premier source of information on the laboratory rat

This new edition--a must for all researchers who use these lab animals-- provides practical suggestions for breeding, keeping, and identifying pathogen-free laboratory rodents. It contains three informative sections. The first, Principles of Rodent Disease Prevention, summarizes methods for eliminating infectious agents. It offers information on pathogen terminology; pathogen status of rodents; and breeding, transporting, isolating, testing, and diagnosing rodents. The second section, Individual Disease Agents and Their Effects on Research, describes the diagnosis and control of each infectious agent, and the last section, Diagnostic Indexes: Clinical Signs, Pathology, and Research Complications, contains informative tables covering all the diseases listed in the volume, arranged to help in the diagnosis of infected animals.

Despite the fact that the majority of research animals are rodents, the trainers at the Research Animal Resources Center at the University of Wisconsin-Madison found training material on the proper handling of mice and rats in biomedical research to be limited. So, they developed videos, narratives, pictures, and text to teach common handling, injection, and bleeding techniques. The resulting DVDs and supporting manuals are complete training resources and refreshers for lab animal veterinarians, veterinary technicians, animal care staff, trainers, and researchers working with mice and rats. Each DVD Provides: Narrated video clips that demonstrate and describe each procedural technique Easy navigation to desired techniques, including handling/transfer, oral gavage, blood draw, restraint, injection, and ear notching and tagging Each Manual Includes: Full text narratives and procedural handouts with full-color illustrations of each technique included on the DVD—including purpose and application of the procedure, recommended skills, and necessary supplies Supplementary chapters that provide normative data for the laboratory rat and mouse Buy the set and save! Two Manuals and Two DVDs Also available as individual volumes: Laboratory Mouse Procedural Techniques: Manual and DVD Catalog no. K12294, November 2010, ISBN: 978-1-4398-5042-8 Laboratory Rat Procedural Techniques: Manual and DVD Catalog no. K12295, November 2010, ISBN: 978-1-4398-5044-2

Expanding on the National Research Council's™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™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 ANATOMY OF THE LABORATORY MOUSE

A Guide to the Location and Orientation of Tissues for Optimal Histological Evaluation

Laboratory Animal

Manuals and DVDs

Their Effects on Research

This reference series will provide all researchers using laboratory animals with comprehensive practical information on the various species. Each title in the series is devoted to a particular species, and draws together all available data in a "one-stop", easily accessible source. Each has similar format, with sections on the strains available, their husbandry, and special diets. Also included are sections on gross anatomy, endocrinology, and reproduction, followed by more detailed sections on neuroanatomy, vasculature, cell biology, and histology of particular organs and structures, and a section on molecular biology. High quality illustrations are included throughout and a color plate section is provided. A glossary, list of equipment suppliers, and "Quick Reference Section" are added features. The "Quick Reference Section" brings together all tables from the text, allowing readers to find data swiftly. The first volume in The Handbook of Experimental Animals Series, The Laboratory Rat, provides researchers in academia and industry using laboratory animals with comprehensive, practical information on the species. The Laboratory Rat has been divided into eight sections dealing with: * Strains and their selection for research * Housing and maintenance * Pathogens and diseases * Breeding and reproduction * Anatomy * Physiology * Procedures, including experimental surgery * Emerging techniques, including genetic engineering and molecular technology

Key Features * Provides a valuable, comprehensive reference source for anybody working with the laboratory rat * Formatted in a two-color, user-friendly layout * Includes high-quality illustrations throughout as well as a color plate section * Glossary * Tables in the text are also arranged into one Quick Reference Section for ease of access to the data * Appendix of equipment suppliers

This combination manual and DVD provides much-needed training on the proper handling of rats used in biomedical research. The DVD includes narrated video clips that demonstrate and describe each procedural technique. The manual contains handouts with color illustrations and descriptive text for each technique, including the purpose and application of the procedure, recommended skills, and necessary supplies. It can be used as a training resource and refresher for lab animal veterinarians, veterinary technicians, animal care staff, trainers, and research investigators and staff who work with rats.

Scientific advances in our understanding of animal physiology and behavior often require theories to be revised and standards of practice to be updated to improve laboratory animal welfare. This new book from the Institute for Laboratory Animal Research (ILAR) at the National Research Council, Recognition and Alleviation of Distress in Laboratory Animals, focuses on the stress and distress which is experienced by animals when used in laboratory research. This book aims to educate laboratory animal veterinarians; students, researchers, and investigators; animal care staff, as well as animal welfare officers on the current scientific and ethical issues associated with stress and distress in laboratory animals. It evaluates pertinent scientific literature to generate practical and pragmatic guidelines. Recognition and Alleviation of Distress in Laboratory Animals focuses specifically on the scientific understanding of the causes and the functions of stress and distress, the transformation of stress to distress, and the identification of principles for the recognition and alleviation of distress. This book discusses the role of humane endpoints in situations of distress and principles for the minimization of distress in laboratory animals. It also identifies areas in which further scientific investigation is needed to improve laboratory animal welfare in order to adhere to scientific and ethical principles that promote humane care and practice.

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 UFAW Handbook on the Care and Management of Laboratory and Other Research Animals

Laboratory Mouse Procedural Techniques

The Laboratory Rabbit, Guinea Pig, Hamster, and Other Rodents

The Behavior of the Laboratory Rat

The Laboratory Rat

Despite the fact that the majority of research animals are rodents, the trainers at the Research Animal Resources Center at the University of Wisconsin-Madison found training material on the proper handling of mice and rats in biomedical research to be limited. So, they developed videos, narratives, pictures, and text to teach common handling, inje

The Laboratory Rabbit, Guinea Pig, Hamster, and Other Rodents is a single volume, comprehensive book sanctioned by the American College of Laboratory Animal Medicine (ACLAM), covering the rabbit, guinea pig, hamster, gerbil and other rodents often used in research. This well illustrated reference includes basic biology, anatomy, physiology, behavior, infectious and noninfectious diseases, husbandry and breeding, common experimental methods, and use of the species as a research model. With many expert contributors, this will be an extremely valuable publication for biomedical researchers, laboratory animal veterinarians and other professionals engaged in laboratory animal science. A new gold standard publication from the American College of Laboratory Animal Medicine series One stop resource for advancements in the humane and responsible care of: rabbit, guinea pig, hamster, gerbil, chinchilla, deer mouse, kangaroo rat, cotton rat, sand rat, and degu Includes up-to-date, common experimental methods Organized by species for easy access during bench research

Mice have long been recognized as a valuable tool for investigating the genetic and physiological bases of human diseases such as diabetes, infectious disease, cancer, heart disease, and a wide array of neurological disorders. With the advent of transgenic and other genetic engineering technologies, the versatility and usefulness of the mouse as a

Larry Carbone, a veterinarian who is in charge of the lab animal welfare assurance program at a major research university, presents this scholarly history of animal rights. Biomedical researchers, and the less fanatical among the animal rights activists will find this book reasonable, humane, and novel in its perspective. It brings a novel, sociological perspective to an area that has been addressed largely from a philosophical perspective, or from the entrenched positions of highly committed advocates of a particular position in the debate.

Pathology of Laboratory Rodents and Rabbits
Experimental Surgical Models in the Laboratory Rat
Manual and DVD

Expertise and Advocacy in Laboratory Animal Welfare Policy
Handbook of Laboratory Animal Anesthesia and Pain Management

US/Japan meetings on laboratory animal science have been held virtually every year since 1980 under the US/Japan Cooperative Program on Science and Technology. Over the years these meetings have resulted in a number of important documents including the Manual of Microbiologic Monitoring of Laboratory Animals published in 1994 and the article Establishment and Preservation of Reference Inbred Strains of Rats for General Purposes. In addition to these publications, the meetings have been instrumental in increasing awareness of the need for microbiologic monitoring of laboratory rodents and the need for genetic definition and monitoring of mice and rats. In cooperation with the Comparative Medicine section of NCR/NIH, the ILAR Council and staff are pleased to become the host for this important annual meeting and look forward to participating in future meetings. The support and sponsorship of NCR (P40 RR 11611) in the United States and the Central Institute for Experimental Animals in Japan are gratefully acknowledged. Bringing together the leading scientists in the field of laboratory animal care has resulted in increased understanding of American and Japanese approaches to laboratory animal science and should continue to strengthen efforts to harmonize approaches aimed at resolving common challenges in the use of animal models for biomedical research and testing. This effort to improve understanding and cooperation between Japan and the United States should also be useful in developing similar interaction with other regions of the world including Europe, Australia, and Southeast Asia.

An All-Inclusive Guide to Surgical Techniques on Rats The 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 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

The Laboratory Animal Pocket Reference Series was created to assist anyone who works with laboratory animals, enabling him or her to provide the most humane and responsible care. These 14 volumes are compact and comb-bound to lay flat for use in the laboratory. The contents of each includes important biological features, husbandry, management, veterinary care, regulatory concerns, and commonly used and new procedures, as well as a section that includes an invaluable list of suppliers. Each book in the series can be purchased individually or as part of the set. The series includes the following titles: The Laboratory Cat The Laboratory Nonhuman Primate The Laboratory Hamster and Gerbil The Laboratory Small Ruminant The Laboratory Canine The Laboratory Xenopus The Laboratory Zebrafish The Laboratory Ferret The Laboratory Swine, Second Edition The Laboratory Rabbit, Second Edition The Laboratory Guinea Pig, Second Edition The Laboratory Mouse, Second Edition The Laboratory Rat, Second Edition Critical Care Management for Laboratory Mice and Rats

Laboratory Animal Medicine

The Laboratory Rat and Mouse

Infectious Diseases of Mice and Rats

Anatomy and Histology of the Laboratory Rat in Toxicology and Biomedical Research

Companion Guide to Infectious Diseases of Mice and Rats

Pathology of Laboratory Rodents and Rabbits has become a standard text for both veterinary pathologists and veterinarians in laboratory animal medicine. Newly recognized infectious diseases continue to emerge and molecular methods for studying infectious agents are becoming widely used for the classification of these and previously known pathogens. With the ongoing development and perfection of genetic engineering techniques, the use of genetically engineered mice in the research laboratory continues to grow exponentially. This new edition features updates throughout with increased emphasis on timely topics such as infectious diseases in genetically engineered mice. Diseases covered include viral infections, bacterial infections, parasitic diseases, nutritional and metabolic disorders, behavioral disorders, aging and degenerative disorders, environment-related disease, and neoplasms. Organized by species, coverage includes mice, rats, hamsters, gerbils, guinea pigs, and rabbits. Veterinary pathologists, laboratory animal veterinarians, and students will appreciate the concise organization and easily accessible information on key diagnostic features, differential diagnoses, and significance of diseases.

Rats have long been recognized as a valuable biomedical research model, notably in the investigation of aging, toxicology, addiction, and common human diseases such as diabetes and hypertension. In many instances, individuals conducting such research studies are charged with important responsibilities, including animal facility management, animal husbandry, veterinary care, regulatory compliance, and various experimental methodologies. With the advent of genetic manipulations and biomedical research technological advances such as bioimaging, the versatility and usefulness of the rat as an animal model has soared. The Laboratory Rat, Second Edition captures the multiple advances in this important animal model's husbandry, veterinary

care, and experimental methodology. This edition features augmented, expanded, and novel information on biology, anesthesia, analgesia, and experimental techniques benefiting personnel working with rats—from the animal care staff to the researcher and everyone in between. The book is also extremely useful to institutional animal care and use program supporters and elements, including animal care and use committees, institutional officials, occupational health and safety professionals, veterinary technicians, and veterinarians.

The Laboratory Mouse, Second Edition is a comprehensive book written by international experts. With inclusions of the newly revised European standards on laboratory animals, this will be the most current, global authority on the care of mice in laboratory research. This well-illustrated edition offers new and updated chapters including immunology, viruses and parasites, behavior, enrichment and care standards of laboratory mice across the life sciences, medical and veterinary fields. Features four-color illustrations with complete instruction on mouse surgery, anatomy, behavior and care of the mouse in laboratory research Offers additional chapters on new mouse strains, phenotyping of strains, bacteria and parasites, and immunology Includes the newly revised EU standards on care, as well as, comparisons to standards and regulations in the US and other countries

This companion to Infectious Diseases of Mice and Rats makes practical information on rodent diseases readily accessible to researchers. This volume parallels the three parts of the main volume. Part I, Principles of Rodent Disease Prevention, briefly examines the requirements for maintaining pathogen-free rodents, factors in designing health surveillance programs, and other laboratory management issues. Part II, Disease Agents, is an easy-to-use reference section, listing diagnosis and control methods, the potential for interference with research, and other factors for disease agents ranging from adenoviruses to tapeworms. It covers bacteria, viruses, fungi and common ectoparasites, and endoparasites. Part III, Diagnostic Indexes, presents alphabetical listings of clinical signs, pathology, and research complications and lists infectious agents that might be responsible for each.

Mrs. Frisby and the Rats of Nimh

Recognition and Alleviation of Distress in Laboratory Animals

Some Implications for Biomedical Research

Laboratory Mouse and Laboratory Rat Procedural Techniques

Microbial Status and Genetic Evaluation of Mice and Rats

Key features: Presents practical information in easily accessible 'bullet point' format Covers anesthetic machine and related equipment, anesthetic management and monitoring, anesthesia and analgesia pharmacology, euthanasia, and record keeping Written by well-recognized experts in the laboratory animal community Provides extensive references to direct the reader to sources for further study of alternative techniques and their procedures Concludes with a thorough chapter on Regulatory Management of Rodent Anesthesia which has global application Rodents are the most commonly used species in biomedical research. Individuals conducting rodent research are often responsible to ensure that all areas of anesthesia and analgesia are performed humanely. Anesthetic agent selection, anesthetic monitoring, and postoperative pain assessment and management are essential to the institutional animal care and use program and contribute significantly to the 3Rs by reducing pain and/or distress and refining various procedures. The Handbook of Laboratory Animal Anesthesia and Pain Management: Rodents is the first book to capture multiple advances in this important area that greatly impacts various experimental methodologies. Richly illustrated in full color, the book serves as a quick reference source for investigators, veterinarians, technicians, and other animal caretakers charged with the care and use of rodents in a research setting. The unique format of this book also makes it extremely valuable to IACUC members, institutional officials, and occupational health and safety professionals.

The Laboratory Rat, Volume I: Biology and Diseases focuses on the use of rats in specific areas of research, ranging from dental research to toxicology. The first part of this book retraces the biomedical history of early events and personalities involved in the establishment of rats as a leading laboratory animal. The taxonomy, genetics and inbred strains of rats are also elaborated. The next chapters illustrate the hematology, clinical biochemistry, and anatomical and physiological features of the laboratory rat. This text concludes with a description of infectious diseases that may be contracted from laboratory and/or wild rats. This volume is a good source for commercial and institutional organizations involved in producing rats for research use, specialists in laboratory animal, animal care and research technicians, as well as students in graduate and professional curricula.

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).

In the years since the third edition of this indispensable reference was published, a great deal has been learned about the nutritional requirements of common laboratory species: rat, mouse, guinea pig, hamster, gerbil, and vole. The Fourth Revised Edition presents the current expert understanding of the lipid, carbohydrate, protein, mineral, vitamin, and other nutritional needs of these animals. The extensive use of tables provides easy access to a wealth of comprehensive data and resource information. The volume also provides an expanded background discussion of general dietary considerations. In addition to a more user-friendly organization, new features in this edition include: A significantly expanded section on dietary requirements for rats, reporting substantial new findings. A new section on nutrients that are not required but that may produce beneficial results. New information on growth and reproductive performance among the most commonly used strains of rats and mice and on several hamster species. An expanded discussion of diet formulation and preparation--including sample diets of both purified and natural ingredients. New information on mineral deficiency and toxicity, including warning signs. This authoritative resource will be important to researchers, laboratory technicians, and manufacturers of laboratory animal feed.

Critical Care Management for Laboratory Mice and Rats

Biology of the laboratory mouse

Guidelines for the Care and Use of Mammals in Neuroscience and Behavioral Research

Laboratory Mouse Handbook

Fourth Revised Edition, 1995

Anatomy and Histology of the Laboratory Rat in Toxicology and Biomedical Research presents the detailed systematic anatomy of the rat, with a focus on toxicological needs. Most large works dealing with the laboratory rat provide a chapter on anatomy, but fall far short of the detailed account in this book which also focuses on the needs of toxicologists and others who use the rat as a laboratory animal. The book includes detailed guides on dissection methods and the location of specific tissues in specific organ systems. Crucially, the book includes classic illustrations from Miss H. G. Q. Rowett, along with new color photo-micrographs. Written by two of the top authors in their fields, this book can be used as a reference guide and teaching aid for students and researchers in toxicology. In addition, veterinary/medical students, researchers who utilize animals in biomedical research, and researchers in zoology, comparative anatomy, physiology and pharmacology will find this book to be a great resource. Illustrated with over 100 black and white and color images to assist understanding Contains detailed descriptions and explanations to accompany all images, thus helping with self-study Designed for toxicologic research for people from diverse backgrounds, including biochemistry, pharmacology, physiology, immunology and general biomedical sciences

For critical care of laboratory rodents, there is a scarcity of sources for comprehensive, feasible, and response-oriented information on clinical interventions specific to spontaneous and induced models of disease. With the more complex cases that need critical care management, many treatment approaches to veterinary emergencies cannot be applied directly to the laboratory rodent. The first text of its kind devoted to the challenges of critical care management for laboratory rodents, Critical Care Management for Laboratory Mice and Rats provides a specialized resource for all veterinary, husbandry, technical, and research professionals who utilize rodent models for biomedical research. The book covers the varied approaches to laboratory rodent patient care, health assessments, characteristics of specific disease models, monitoring and scoring of disease parameters, and humane interventions. Giving primary consideration to preservation of animal health and welfare, the text also considers how best to balance welfare with the achievement of proposed scientific objectives. Organized into five chapters, this full-color book covers the following topics: General Approaches for Critical Care Critical Care Management for Laboratory Mice Critical Care Management for Laboratory Rats Special Considerations for Critical Care Management in Laboratory Rodents Resources and Additional Information The author provides treatment guidelines with the expectation that they will be applied with apt professional judgment, allowing for further modification of clinical recommendations for improved patient-based care and welfare for research animals.

Currently, there is a paucity of training material for experimental techniques in laboratory rodents, particularly audiovisual material. The manuals and accompanying DVDs will be of great interest to students, technicians, veterinarians, and investigators. Importantly, the straightforward approach taken in both the printed manual and DVD will be seen as an excellent tool for non-English speaking personnel.--Mark A. Suckow, DVM, Dipl. ACLAM, Director, Freimann Life Science Center, University of Notre Dame, & Past President of AALAS Persons [students of animal technology] can watch these videos to get the picture and then practice with an experienced individual. It is a good refinement step of the 3Rs.... I will be very excited to have these manuals to use as training items with my students and as reference resources in our animal facility.--Bruce W. Kennedy, MS, RLATG, CMAR, Compliance Associate, Research & Graduate Studies, California State Polytechnic University, Pomona, & Past President of AALAS The trainers at the Research Animal Resources Center at the University of Wisconsin-Madison developed videos, narratives, pictures, and text to teach common handling, injection, and bleeding

techniques of mice. The resulting DVD and supporting manual is a complete training resource and refresher for lab animal veterinarians, veterinary technicians, animal care staff, trainers, and researchers working with mice.

Some extraordinary rats come to the aid of a mouse family in this Newbery Medal Award-winning classic by notable children's author Robert C. O'Brien. Mrs. Frisby, a widowed mouse with four small children, is faced with a terrible problem. She must move her family to their summer quarters immediately, or face almost certain death. But her youngest son, Timothy, lies ill with pneumonia and must not be moved. Fortunately, she encounters the rats of NIMH, an extraordinary breed of highly intelligent creatures, who come up with a brilliant solution to her dilemma. And Mrs. Frisby in turn renders them a great service.

Eighth Edition

Guide for the Care and Use of Laboratory Animals

A Handbook with Tests

Biology and Diseases

Natural Pathogens of Laboratory Animals

Both seasoned and beginning investigators will be amazed at the range and complexity of rat behavior as described in the 43 chapters of this volume. The behavioral descriptions are closely tied to the laboratory methods from which they were derived, thus allowing the investigator to exploit both the behavior and the methods for their own research. It will also serve as an indispensable reference for other neuroscientists, psychologist, pharmacologists, geneticists, molecular biologists, zoologists, and their students and trainees.

The seminal reference on the care of laboratory and captive animals, The UFAW Handbook on the Care and Management of Laboratory and Other Research Animals is a must-have for anyone working in this field. The UFAW Handbook has been the definitive text since 1947. Written for an international audience, it contains contributions from experts from around the world. The book focuses on best practice principles throughout, providing comprehensive coverage, with all chapters being peer reviewed by anonymous referees. As well as addressing the husbandry of laboratory animals, the content is also of great value to zoos and aquaria. Changes for the eighth edition: Revised and updated to reflect developments since publication of the previous edition. New chapters on areas of growing concern, including: the 3Rs; phenotyping; statistics and experimental design; welfare assessment; legislation; training of people caring for lab animals; and euthanasia. All material combined into one volume for ease of reference. This book is published on behalf of UFAW (The Universities Federation for Animal Welfare), with whom we also publish the UFAW/Wiley-Blackwell Animal Welfare Book Series. This major series of books provides an authoritative source of information on worldwide developments, current thinking and best practice in the field of animal welfare science and technology. For details of all of the titles in the series see <http://www.wiley.com/go/ufaw>

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.

Key features: High quality full color photographs and descriptive texts on the location and removal of the organs from the mouse Instructive methods and clear visuals for trimming and orienting the organs for paraffin histology to obtain the best possible sections for analysis Full color photomicrographs of the resulting section for each organ stained with hematoxylin and eosin demonstrating important features and landmarks for the histologist to ensure the optimal area for analysis is achieved All in one, easy to use guide organized by individual organs of the laboratory mouse. This "one-stop" guide offers an essential resource for any academic, research or development operation where mouse necropsy and/or histology are performed. Connecting the reader 'from the mouse to the microscope', it provides a detailed guide for locating, trimming, orientating and embedding of the most frequently investigated tissues collected in the laboratory mouse. It shows where the organs reside in the mouse, how to trim and embed them as well as the resulting optimal sections. This guide brings together the wealth of scattered information into one high-quality text, the emphasis is on providing knowledge that will help histologists and scientists get better results in any downstream assays where ideal sections are needed.

Laboratory Rat and Mouse Colonies

The Laboratory Mouse

What Animals Want

The Laboratory Rat, Second Edition

Rodents

This combination manual and downloadable resources provide much-needed training on the proper handling of rats used in biomedical research. The downloadable resources include narrated video clips that demonstrate and describe each procedural technique. The manual contains handouts with color illustrations and descriptive text for each technique, including the purpose and application of the procedure, recommended skills, and necessary supplies. It can be used as a training resource and refresher for lab animal veterinarians, veterinary technicians, animal care staff, trainers, and research investigators and staff who work with rats.

Management of Animal Care and Use Programs in Research, Education, and Testing

Proceedings of the 1999 US/Japan Conference

Laboratory Rat Procedural Techniques
Nutrient Requirements of Laboratory Animals,