

Comparative Anatomy And Histology A Mouse And Human Atlas Expert Consult Online And Print

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 Comparative Anatomy and Histology A Mouse, Rat, and Human Atlas Academic Press The first in-depth textbook of its kind, this resource deals solely with the comparative anatomy and physiology of exotic species - small mammals, reptiles, and birds. For these commonly

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encountered species, it highlights clinical considerations for veterinary treatment. The book is heavily illustrated with clear line diagrams, radiographs, and color illustrations, explaining clearly the functioning of exotic species. The first textbook to provide comprehensive coverage of the comparative anatomy and physiology of exotic species. Written specifically to give the veterinary practitioner a better understanding of the functioning of exotic species. Profusely illustrated with clear line diagrams, radiographs, and color plates. With 3 contributors

Atlas of Comparative Vertebrate Histology looks at the histology of a wide range of vertebrates, representative of all the major classes and families, with examples ranging from amphioxus to primates. The authors focus their microscope on commonly seen vertebrates as well as 'non-standard' species, such as lamprey, hagfish, dogfish, skate, rock bass, cod, river catfish, toad, amphiuma, leopard and bull frog, garter and brown snake, Coturnix quail and cowbird. The study of comparative histology in the vertebrates helps students and researchers alike understand how various groups have addressed similar problems, opening doors to interesting research possibilities. Not all vertebrates follow the mammalian model of tissue and organ structure. When dealing with unique species, we see some structures taken beyond their 'normal' function. Comparative histology allows us to understand the structural responses underlying the physiology unique to each vertebrate group. Presents the histology of a wide range of vertebrates, representative of all the major classes and families, with examples ranging from amphioxus to primates Includes an image gallery with over 500 flat images and 50+ virtual microscopy slides Contains electronic content features cross linking between text, tables and the image gallery

The second edition of Comparative Anatomy and Histology is aimed at the new rodent

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investigator as well as medical and veterinary pathologists who need to expand their knowledge base into comparative anatomy and histology. It guides the reader through normal mouse and rat anatomy and histology using direct comparison to the human. The side by side comparison of mouse, rat, and human tissues highlight the unique biology of the rodents, which has great impact on the validation of rodent models of human disease. Offers the only comprehensive source for comparing mouse, rat, and human anatomy and histology through over 1500 full-color images, in one reference work Enables human and veterinary pathologists to examine tissue samples with greater accuracy and confidence Teaches biomedical researchers to examine the histologic changes in their model rodents Experts from both human and veterinary fields take readers through each organ system in a side-by-side comparative approach to anatomy and histology - human Netter anatomy images along with Netter-style rodent images

Boorman's Pathology of the Rat: Reference and Atlas, Second Edition, continues its history as the most comprehensive pathology reference on rat strains for researchers across science and medicine using rat models in the laboratory. It offers readers an added emphasis on the Sprague-Dawley and Wistar rat strains that is consistent with current research across academia, government, and industry. In addition, the book provides standard diagnostic criteria, basic content on histology, histological changes that result from drug toxicity and neoplasm, pathology terminology, and four-color photographs from the NTP archive and database. With updated references and photographs, as well as coverage of all rat strains, this book is not only the standard in

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the field, but also an invaluable resource for toxicologists, biologists, and other scientists engaged in regulatory toxicology who must make the transition from pathology results to the promulgation of meaningful regulations. Contains full, four color photographs from the NTP archive and database and coverage of all rat strains Provides an organ-by-organ and system-by-system approach that presents standard diagnostic criteria and basic content on histology and histological changes Includes comprehensive and detailed background incidence data Presents detailed descriptive content regarding changes in rat models during research

An anthropologist and an anatomist have combined their skills in this book to provide students and research workers with the essentials of anatomy and the means to apply these to investigations into hominid form and function. Using basic principles and relevant bones, conclusions can be reached regarding the probable musculature, stance, brain size, age, weight, and sex of a particular fossil specimen. The sort of deductions which are possible are illustrated by reference back to contemporary apes and humans, and a coherent picture of the history of hominid evolution appears. Written in a clear and concise style and beautifully illustrated, *An Introduction to Human Evolutionary Anatomy* is a basic reference for all concerned with human evolution as well as a valuable companion to both laboratory practical sessions and new research using fossil skeletons.

Atlas of the Anatomy of Dolphins and Whales is a detailed, fully illustrated atlas on the

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anatomy and morphology of toothed and whalebone whales. The book provides basic knowledge on anatomical structures, in particular, soft tissues, and functions as a standalone reference work for dissecting rooms and labs, and for those sampling stranded and by-caught dolphins in the field. As a companion and supplement to *Anatomy of Dolphins: Insights into Body Structure and Function*, this atlas will be of great interest to the scientific community, including veterinarians and biologists, as a book of reference. With a modern approach to dolphin anatomy and morphology, this atlas provides the extensive knowledge necessary to practitioners and theoretical scientists such as evolutionary biologists. The conceptual clarity, precision, and comprehensive and updated display of the topographical anatomy of the body of cetaceans in the atlas support and illustrate the authors' related work, serving as a comprehensive reference for those who are more specifically interested in the details of the anatomy and morphology of porpoises, dolphins and whales. Offers a single reference source and useful teaching tool for visualizing the integrated body and its components Functions as a helpful method for demonstrating the animal's anatomy prior to dissection, and for teaching topographic and comparative anatomy Provides a unique and authoritative resource that explicitly relates the gross and microscopic anatomy of cetacean organs and tissues The prenatal development of dolphins is largely achieved

Comparative Biology of the Normal Lung, 2nd Edition, offers a rigorous and

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comprehensive reference for all those involved in pulmonary research. This fully updated work is divided into sections on anatomy and morphology, physiology, biochemistry, and immunological response. It continues to provide a unique comparative perspective on the mammalian lung. This edition includes several new chapters and expanded content, including aging and development of the normal lung, mechanical properties of the lung, genetic polymorphisms, the comparative effect of stress of pulmonary immune function, oxygen signaling in the mammalian lung and much more. By addressing scientific advances and critical issues in lung research, this 2nd edition is a timely and valuable work on comparative data for the interpretation of studies of animal models as compared to the human lung. Edited and authored by experts in the field to provide an excellent and timely review of cross-species comparisons that will help you interpret and compare data from animal studies to human findings Incorporates lung anatomy and physiology, cell specific interactions and immunological responses to provide you with a single and unique multidisciplinary source on the comparative biology of the normal lung Includes new and expanded content on neonatal and aged lungs, developmental processes, cell signaling, antioxidants, airway cells, safety pharmacology and much more Section IV on Physical and Immunological Defenses has been significantly updated with 9 new chapters and an increased focus on the pulmonary immunological system
A Practical Guide to the Histology of the Mouse provides a full-colour atlas of mouse

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histology. Mouse models of disease are used extensively in biomedical research with many hundreds of new models being generated each year. Complete phenotypic analysis of all of these models can benefit from histologic review of the tissues. This book is aimed at veterinary and medical pathologists who are unfamiliar with mouse tissues and scientists who wish to evaluate their own mouse models. It provides practical guidance on the collection, sampling and analysis of mouse tissue samples in order to maximize the information that can be gained from these tissues. As well as illustrating the normal microscopic anatomy of the mouse, the book also describes and explains the common anatomic variations, artefacts associated with tissue collection and background lesions to help the scientist to distinguish these changes from experimentally- induced lesions. This will be an essential bench-side companion for researchers and practitioners looking for an accessible and well-illustrated guide to mouse pathology. Written by experienced pathologists and specifically tailored to the needs of scientists and histologists Full colour throughout Provides advice on sampling tissues, necropsy and recording data Includes common anatomic variations, background lesions and artefacts which will help non-experts understand whether histologic variations seen are part of the normal background or related to their experimental manipulation

The Comparative Anatomy and Histology of the Cerebellum was first published in 1972. Minnesota Archive Editions uses digital technology to make long-

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unavailable books once again accessible, and are published unaltered from the original University of Minnesota Press editions. This is the third and final volume of the late Dr. Larsell's definitive work on the cerebellum, brought to completion for publication by Dr. Jansen. Two additional contributing authors for this volume are Enrico Mugnaini, M.D., and Helge K. Korneliussen, M.D. The first section of this volume deals with the morphology of the human cerebellum. The morphogenetic development, the fissure formation, and the differentiation of the cerebellar lobules are described in detail, and followed by a comprehensive account of the adult cerebellum, its lobes and lobules. It is shown that the ten major lobules which Dr. Larsell distinguished in other mammals are recognizable also in man. Chapters on the cerebellum connections include detailed accounts of all afferent and efferent cerebellar tracts. A subsequent chapter, by Drs. Jansen and Korneliussen, is devoted to the fundamental plan of cerebellar organization. The final chapters, by Dr. Mugnaini, deal with the histology and cytology of the cerebellar cortex. A comprehensive account is given of electron micrographs, a virtual atlas of the ultrastructure of the cerebellar cortex, illustrate the description.

Organized by body-system, this highly illustrated volume covers the normal histological appearance of tissues in a wide range of animals, both domestic and

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exotic species, with relevant clinical correlates emphasizing the need to appreciate the normal in order to recognize the abnormal. The breadth of coverage—farm animals, dogs, cats, horses, birds, reptiles, amphibians, and fish—and the integration of normal and abnormal tissue provide a reference of lasting value to veterinary students, veterinary practitioners, and pathologists. This is a reproduction of a book published before 1923. This book may have occasional imperfections such as missing or blurred pages, poor pictures, errant marks, etc. that were either part of the original artifact, or were introduced by the scanning process. We believe this work is culturally important, and despite the imperfections, have elected to bring it back into print as part of our continuing commitment to the preservation of printed works worldwide. We appreciate your understanding of the imperfections in the preservation process, and hope you enjoy this valuable book.

This full-color manual is a unique guide for students conducting the comparative study of representative vertebrate animals. It is appropriate for courses in comparative anatomy, vertebrate zoology, or any course in which the featured vertebrates are studied. Includes coverage of the lamprey, dogfish shark, perch, mudpuppy, bullfrog, pigeon, and cat. Evolutionary concepts, comparative morphology, and histology are covered comprehensively. Loose-leaf and three-

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hole drilled.

diFiore's Atlas of Histology with Functional Correlations explains basic histology concepts through realistic, full-color composite and idealized illustrations of histologic structures. Added to the illustrations are actual photomicrographs of similar structures, a popular trademark of the atlas. All structures are directly correlated with the most important and essential functional correlations, allowing students to efficiently learn histologic structures and their major functions at the same time. This new edition features:

- New chapter on cell biology accompanied by both drawings and representative photomicrographs of the main stages in the cell cycle during mitosis
- Contents reorganized into four parts, progressing logically from Methods and Microscopy through Tissues and Systems

diFiore's Atlas of Histology is the perfect resource for medical and graduate histology students.

This atlas presents the basic concepts and principles of functional animal anatomy and histology thereby furthering our understanding of evolutionary concepts and adaptation to the environment. It provides a step-by-step dissection guide with numerous colour photographs of the animals featured. It also presents images of the major organs along with histological sections of those organs. A wide range of interactive tutorials gives readers the opportunity to evaluate their understanding of the basic anatomy and

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histology of the organs of the animals presented.

Atlas of Histology of the Juvenile Rat should be of interest to toxicologic pathologists, toxicologists, and other biological scientists who are interested in the histomorphology of juvenile rats. For several decades the laboratory rat has been used extensively in nonclinical toxicology studies designed to detect potential human toxicity of drugs, agrochemicals, industrial chemicals, and environmental hazards. These studies traditionally have involved young adult rats that are 8-10 weeks of age as studies are started. It is becoming increasingly apparent that children and young animals may have different responses to drug/chemical exposures, therefore, regulatory agencies are emphasizing toxicology studies in juvenile animals. While the histologic features of organs from young adult and aged laboratory rats are well known, less is known about the histologic features of organs from juvenile rats. Final histologic maturity of many organs is achieved postnatally, thus immature histologic features must be distinguished from chemical- or drug-related effects. While this postnatal organ development is known to exist as a general concept, detailed information regarding postnatal histologic development is not readily available. The Atlas includes organs that are typically sampled in nonclinical toxicology studies and presents the histologic features at weekly intervals, starting at birth and extending through postnatal day 42. Written and edited by highly experienced, board-certified toxicologic pathologists Includes more than 700 high-resolution microscopic images from organs that are typically examined in safety

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assessment toxicology studies Detailed figure legends and chapter narratives present the salient features of each organ at each time interval Figures are available for further study via Elsevier's Virtual Microscope, which allows viewing of microscopic images at higher magnification Valuable resource for toxicologic pathologists who are confronted with interpretation of lesions in juvenile rats in situations where age-matched concurrent controls are not available for comparison, e.g., with unscheduled decedents Figures are available for further study on ScienceDirect with Virtual Microscope, which allows viewing of microscopic images at higher magnification

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an important part of keeping this knowledge alive and relevant.

Key features: Beautifully illustrated with detailed, full-colour images - very user-friendly for investigators, students, and technicians who work with animals Provides essential information for research and clinical purposes, describing some structures not usually shown in any other anatomy atlas In each set of illustrations, the same view is depicted in the mouse and the rat for easy comparison Text draws attention to the anatomical features which are important for supporting the care and use of these animals in research Endorsed by the American Association of Laboratory Animal Science (AALAS) Comparative Anatomy of the Mouse and Rat: a Color Atlas and Text provides detailed comparative anatomical information for those who work with mice and rats in animal research. Information is provided about the anatomical features and landmarks for conducting a physical examination, collecting biological samples, making injections of therapeutic and experimental materials, using imaging modalities, and performing surgeries.

Vertebrate Skeletal Histology and Paleohistology summarizes decades of research into the biology and biological meaning of hard tissues, in both living and extinct vertebrates. In addition to outlining anatomical diversity, it provides fundamental phylogenetic and evolutionary contexts for interpretation. An international team of leading authorities review the impact of ontogeny, mechanics, and environment in relation to bone and dental tissues. Synthesizing current advances in the biological

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problems of growth, metabolism, evolution, ecology, and behavior, this comprehensive and authoritative volume is built upon a foundation of concepts and technology generated over the past fifty years.

This atlas contains 189 coloured images taken from transversal, horizontal and sagittal sections of eleven organisms widely used in university teaching. Six invertebrate and five vertebrate species – from the nematode worm (*Ascaris suum*) to mammals (*Rattus norvegicus*) – are shown in detailed images. Studying the macrosections with unaided eyes, with a simple magnifier or binocular microscope might be of great help to accomplish traditional anatomical studies and to establish a certain spatial experience/space perception. This volume will be of great interest for biology students, researchers and teachers of comparative anatomy. It might act as supporting material of practical courses. Furthermore, medical practitioners, agricultural specialists and researchers having an interest in comparative anatomy might also benefit from it.

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