

# Manual Of Microsurgery On The Laboratory Rat

The Laboratory RatThe Laboratory RatThe Laboratory RatThe Laboratory Rat, Second EditionThe Laboratory Rat: Research applicationsThe Laboratory RatThe Laboratory RatAnatomy of the Laboratory RatThe Behavior of the Laboratory RatLaboratory RatThe Laboratory RatThe Laboratory RatThe Laboratory RatTHE LABORATORY RAT, VOLUME 1: BIOLOGY AND DISEASES.Anatomy and Histology of the Laboratory Rat in Toxicology and Biomedical ResearchBThe Behavior of the Laboratory RatThe Laboratory Rat. Vol. 2THE LABORATORY RAT, VOLUME 2: RESEARCH APPLICATIONS.The Laboratory Rat and MouseExperimental Surgical Models in the Laboratory Rat Mark A. Suckow Henry J. Baker Patrick Sharp Patrick Sharp Henry J. Baker George J. Krinke Henry J. Baker Rudolf Hebel Ian Q. Whishaw Suckow Patrick E. Sharp HJ BAKER (Ed) Robert L. Maynard Ian Q. Whishaw HJ BAKER (Ed) Universities Federation Animal Welfare Alfredo Rigalli

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the third edition of the laboratory rat features updated information on a variety of topics including rats as research models for basic and translational research in areas such as genomics alcoholism diabetes metabolic syndrome obesity neuroscience spinal cord injury traumatic brain injury regenerative medicine and infectious disease new information related to the husbandry and veterinary care of rats is provided including topics related to nutrition reproduction anesthesia and surgery infectious and noninfectious disease and the care of surgical and other fragile models it is a premier source of information on the laboratory rat this book will be of interest to veterinary and medical students senior graduate students postdocs and researchers who utilize animals in biomedical research new chapters on the care of surgical and fragile models and on the use of rats in research areas such as alcoholism regenerative medicine spinal cord injury traumatic brain injury and others are included all chapters were written by scientific and veterinary experts this book condenses information from many sources on topics related to the care and use of rats in research it is the premier source of information on the laboratory rat

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

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 h

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

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 technologykey 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

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

laboratory animals play an important role in biomedical research and advances the humane care and management of these animals is an ongoing concern this guide was created especially for individuals performing research with rats whose duties include animal facility management animal husbandry regulatory compliance and technical procedures involved with their research basic information and common procedures are presented in detail

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 a hundred black and white and color images to assist understanding contains detailed descriptions and explanations to accompany all images helping with self study designed for toxicologic research for people from diverse backgrounds including biochemistry pharmacology physiology immunology and general biomedical sciences

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 medicine rosario national university argentina stopping just short of an exhaustive analysis of the techniques this manual describes the basics of each surgical technique the necessary materials precautions to consider the methodology to apply and the possible results to be obtained in similar experiments cd rom 250 illustrations of surgery techniques with step by step instruction with succinct descriptions color photographs and easy to follow steps the downloadable resources are a practical full color

roadmap for performing various surgery techniques such as catheterization tracheostomy intramuscular injection subcutaneous injection intraperitoneal injection and oral intubation this definitive work provides technical and practical data including volumes and concentrations of solutions catheters used equipment and biological variables on the rat experimental surgical models in the laboratory rat is a complete reference for today s biomedical sciences investigator

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