



SECOND EDITION

# Handbook of Laboratory Animal Bacteriology

**Axel Kornerup Hansen**  
**Dennis Sandris Nielsen**



**CRC Press**  
Taylor & Francis Group

# Handbook Of Laboratory Animal Bacteriology

**Jonathan David Ward**



## **Handbook Of Laboratory Animal Bacteriology:**

*Handbook of Laboratory Animal Bacteriology* Axel Kornerup Hansen, 1999-08-23 Handbook of Laboratory Animal Bacteriology isolates bacteria in laboratory rodents and rabbits to assist veterinary pathologists and other animal caretakers in the management of these organisms This book emphasizes those bacteria known to interfere with research protocols and offers methods for isolation and differentiation among related bacteria It also enables the bacteriologist to isolate and identify bacteria being part of the normal flora of these animals In the first part of the book information is given on how to sample and cultivate from the animals Hereafter general descriptions on various identification procedures are given Topics include sampling and isolation techniques staining methods serology PCR and other important tools In the second part of the book important laboratory animal bacteria have been described in relation to both characteristics of the agent and characteristics of infection All categories of bacteria are systematically dealt with in order to help in their isolation and identification when examining rodents and rabbits Traditional lab animals mice rats guinea pigs hamsters gerbils and rabbits harbor bacteria different from those found in humans and farm animals Handbook of Laboratory Animal Bacteriology is an invaluable guide bacteriological monitoring of research colonies

## **Handbook of Laboratory Animal Science, Volume I**

Jann Hau, Steven J. Schapiro, 2010-12-02 Laboratory animal testing provides most of our current knowledge of human physiology microbiology immunology pharmacology and pathology From studies of genetics in fruit flies to studies of cellular processes in genetically modified mice to recent dramatic developments in genetics translational research and personalized medicines biomedical

*Handbook of Laboratory Animal Science* Jann Hau, Steven J. Schapiro, 2002-10-28 The second edition of an international bestseller this book provides veterinary specialists as well as veterinary and biomedical researchers with detailed information about laboratory animal genetics diseases health monitoring nutrition and environmental impact on animal experiments Completely revised and updated Volume I now contains expand

**A Manual For Laboratory Animal Management** Jonathan David Ward, 2008-10-21 Laboratory animal research remains a very important part of basic research and drug development With the worldwide increase in biotechnology more and more researchers are required to use animals for research However many have basic or little training in experimental techniques or in the background information which remains very important This book rectifies the problem by providing animal researchers and technicians with the essentials for conducting their work in the laboratory offering detailed protocols and information that can be referred to on a daily basis Broadly covering a number of important topics it draws attention to many of the techniques required to conduct animal research well and responsibly in order to obtain better experimental results

**The Laboratory Rat** Mark A. Suckow, Steven H. Weisbroth, Craig L. Franklin, 2005-12-20 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 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 **Guide for the Care and Use of Laboratory Animals** National Research Council, Division on Earth and Life Studies, Institute for Laboratory Animal Research, Committee for the Update of the Guide for the Care and Use of Laboratory Animals, 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 **Handbook of Laboratory Animals** Institute of Laboratory Animal Resources (U.S.), Harry G. Herrlein, 1954 **The Welfare of Laboratory Animals** Eila Kaliste, 2007-04-18 Animal welfare is attracting increasing interest worldwide but particularly from those in developed countries who now have the knowledge and resources to be able to offer the best management systems for their farm animals as well as potentially being able to offer plentiful resources for companion zoo and laboratory animals The increased attention given to animal welfare in the West derives largely from the fact that the relentless pursuit of financial reward and efficiency has led to the development of intensive animal production systems that offend the conscience of many consumers in those countries In developing countries human survival is still a daily uncertainty so that provision for animal welfare has

to be balanced against human welfare Welfare is usually provided for only if it supports the output of the animal be it food work clothing sport or companionship In reality there are resources for all if they are properly husbanded in both developing and developed countries The inequitable division of the world's riches creates physical and psychological poverty for humans and animals alike in all sectors of the world Livestock are the world's biggest land user FAO 2002 and the population particularly of monogastric animals is increasing rapidly to meet the need of an expanding human population Populations of animals managed by humans are therefore increasing worldwide so there is the tendency to allocate fewer resources to each one

The Laboratory Pig Kirsten Rosenmay Jacobsen, Aage K Olsen Alstrup, Axel K. Hansen, Peter Bollen, 2025-01-31 Since the popular second edition of The Laboratory Swine was published more than a decade ago the number of pigs used in toxicity studies has increased as an alternative to commonly used non rodent species while at the same time large developments have been made in welfare concepts of laboratory animals Pigs have gained prominence in both basic and applied research leading to a significant increase in publication activity This third edition summarizes these new insights raising the bar for humane care and use of pigs from agricultural sources to genetically and microbiologically defined minipigs Aimed at animal caretakers technicians laboratory animal veterinarians and investigators planning and performing studies on pigs it provides an overview with extensive references for further study The book has been updated with a special focus on refined methods for housing and handling pigs including an updated description of commonly performed experimental and surgical procedures Continuing its legacy as the premier reference on the care and use of pigs in the laboratory the small practical and accessible format makes this an easy go to book with easy to find information and high quality color images The third edition aims to contribute to humane use and care for laboratory pigs in all aspects of housing husbandry veterinary care and experimental techniques

*Essentials of Laboratory Animal Science: Principles and Practices* P. Nagarajan, Ramachandra Gudde, Ramesh Srinivasan, 2021-07-23 This book comprehensively reviews the anatomy physiology genetics and pathology of laboratory animals as well as the principles and practices of using laboratory animals for biomedical research It covers the design of buildings used for laboratory animals quality control of laboratory animals and toxicology and discusses various animal models used for human diseases It also highlights aspects such as handling and restraint and administration of drugs as well as breeding and feeding of laboratory animals and provides guidelines for developing meaningful experiments using laboratory animals Further the book discusses various alternatives to animal experiments for drug and chemical testing including their advantages over the current approaches Lastly it examines the potential effect of harmful pathogens on the physiology of laboratory animals and discusses the state of art in in vivo imaging techniques The book is a useful resource for research scientists laboratory animal veterinarians and students of laboratory animal medicine

The Laboratory Swine Peter J. A. Bollen, 2010-02-22 Addressing the biology husbandry management veterinary care and research applications of both large and miniature swine this color resource is renowned as the laboratory

reference on swine 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 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 **The Laboratory Mouse** Hans Hedrich,2004-08-21 Among animals used in research teaching and testing mice are now widely recognized as the most important model for human diseases and disorders They comprise the majority of all experimental mammals and tend to be the model of choice used for research into many diseases disorders including cancer heart disease asthma Alzheimer s Down syndrome deafness osteoporosis obesity diabetes and even mental health research Additionally the laboratory mouse continues to play a widely publicized vital role in the human genome project One of the most time consuming activities in research laboratories is looking up information specific to the species or strain of animal being used This book part of the highly successful Handbook of Experimental Animals series allows the user quick access to any point of interest on the mouse as an experimental model Edited by Hans Hedrich Hannover Medical School Comprehensive reference source written by international experts Well illustrated with high quality detailed images Two color user friendly format combined with color plate sections **Handbook of Laboratory Animal Management and Welfare** Sarah Wolfensohn,Maggie Lloyd,2013-01-03 This bestseller has been an essential book for all those working with laboratory animals since it was first published in 1994 This fourth edition retains all the classic features that have made it a must have reference including emphasis on best practice in order to improve animal welfare The contents have been thoroughly updated and reorganised to make sure it is a really practical book for day to day use in the laboratory The first section of the book covers principles applicable to all species for example husbandry handling and the education and training required by scientists and technical staff working with animals in the laboratory Later chapters focus on specific species or groups of species New to this edition Reflects changes in European legislation and their impact on national legislation Covers recommendations for the education and training of those carrying out animal experiments across Europe New chapters on ethical considerations and balancing animal welfare with science New information on environmental enrichment for laboratory animals Covers advancements in anaesthesia and analgesia and techniques Spiral bound for ease of use as a bench top reference This book is ideal for all personnel carrying out scientific procedures using animals particularly during training and also for the new researcher It will also be essential reading for study directors designing research programmes animal technicians and veterinarians working with laboratory animal species **Rodent Quality Control: Genes and Bugs** Fernando Benavides,Axel Kornerup Hansen,2024-08-12 This book shows how and why quality assurance programmes should be implemented in laboratory rodent facilities to monitor animal health and genetic status It covers common practice to assure the desired level of microbiological and genetic surveillance of both genetically standardized and genetically altered laboratory mice and rats In

particular the book introduces readers to the standardized genetic nomenclature and provides step by step protocols for genetic monitoring of the animals International standards of health monitoring programs are discussed and statistical aspects thereof are explored Furthermore the book reviews common infectious diseases in laboratory rodents and guides the reader in monitoring the animals health status through application of current diagnostic methods This book addresses researchers technicians and zookeepers working in laboratory rodent facilities *A Guide to Laboratory Animal Technology* Martin D Buckland, Lynda Hall, Alan Mowlem, 2013-10-22 A Guide to Laboratory Animal Technology is a compilation of experiences of animal technicians with regard to laboratory animals in both research and breeding establishments This book discusses common laboratory species individually with reference to anatomy reproduction maintenance methods of handling and identification Studies on the common diseases found on these species are also provided All aspects of laboratory animal husbandry are considered including equipment SPF techniques transport and law This selection also includes a guide to examination technique and basic mathematics section that can help students with little experience in either field This text aims to provide an introduction and guide for the newcomers and students of the profession as well as a useful comprehensive reference work for all those concerned with animals

**Information Resources for Institutional Animal Care and Use Committees**, 2000 Reducing, Refining and Replacing the Use of Animals in Toxicity Testing Dave

Allen, Michael D Waters, 2013-10-31 Toxicity testing is used to assess the safety or hazards presented by substances such as industrial chemicals consumer products and pharmaceuticals At present many methods involve laboratory animals Alternative procedures some involving human cell based technologies are now being developed which reduce refine or replace animal usage and minimize the pain and distress caused These new tests must protect public health and the environment at least as well as currently accepted methods This book describes the ever expanding toolbox of methods available to assess toxicity Such techniques often result from our growing understanding of the biochemical and cellular pathways that mediate toxicity mechanisms This permits evaluations of information generated from several sources to generate a weight of evidence By combining in silico in vitro and ex vivo methods with technologies that rely on biochemical and cell based in vitro assays toxicologists are developing mechanistically based alternatives to live animal experimentation This text also explores the complexities associated with adequate validation and the assessment of test reliability and relevance It provides an essential reference source for postgraduates academics and industrialists working in this rapidly changing area

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Personnel Michael D. Kreger, 1995 Aerobiological Engineering Handbook : Airborne Disease and Control Technologies Wladyslaw Kowalski, 2005-12-13 Solve any building air quality problem A complete reference for the design of air filtration systems and HVAC systems used in homes schools hospitals laboratories or animal facilities this book offers complete

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