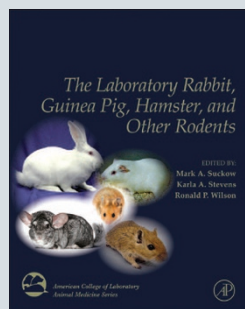


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Reviewed by Michael McGarry, PhD



## THE LABORATORY RABBIT, GUINEA PIG, HAMSTER, AND OTHER RODENTS

Edited by Mark A. Suckow,  
Karla A. Stevens & Ronald P. Wilson

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The volume titled *The Laboratory Rabbit, Guinea Pig, Hamster, and Other Rodents*, edited by Mark A. Suckow, Karla A. Stevens and Ronald P. Wilson, is, according to the preface, "...meant to be an authoritative summary of the basic biology, husbandry, veterinary perspective, and experimental use of these species." The book is an extension of a series of similar volumes on topics in laboratory animal medicine sponsored by the American College of Laboratory Animal Medicine. This single, bound source, addressing a broad spectrum of topics for an important group of laboratory species, has considerable value as a resource. In one volume, it combines materials that have previously been published under separate titles and that present similar information. In an age in which information about any species is readily available via the internet, a fair dose of wisdom must supplement the facts in order to make such an ambitious collection valuable to readers. Fortunately, the editors have selected a number of contributors who are well recognized for their expertise.

The book comprises seven sections divided into 56 chapters. The first section addresses general considerations: (i) ethical considerations and regulatory issues, (ii) anesthesia and analgesia, (iii) clinical biochemistry and hematology, (iv) euthanasia and necropsy and (v) zoonoses and occupational health. This collection of chapters, which may be applied to any of the covered species, provides a valuable prologue for the rest of the text.

Four of the remaining six sections address rabbits (13 chapters), guinea pigs (7 chapters), hamsters (12 chapters) and chinchillas (6 chapters). Chapter topics include origins, history of use and taxonomy; anatomy, physiology and behavior; management, husbandry and colony health; basic experimental methods; common diseases (in some instances separated by etiological

agencies); and, in some sections, examples of common uses as research models. The content is procedure-oriented, which can be of substantial value to researchers and technicians.

The species are not all given equal space: nearly one-third of the entire text is dedicated to chapters that describe the history and use of rabbits. The discussion of transgenesis for the development of rabbit models is excellent. The editors also might have included a discussion of the impact of disrupted expression of genes, such as those involved in low-density lipoprotein and cardiac function, on protocol review and ethics, which were touched upon in the first chapter.

The sixth section provides information about a collection of rodents that are less frequently used in research but are no less noteworthy. The 11 chapters include several species uniquely suited as animal models of diseases, such as the dormouse and cotton rat. These chapters, though relatively short, contain much interesting and useful information.

Though the text contains valuable and interesting reading, some areas include unnecessary specifics of the cited research. The entire book is very well referenced, allowing sufficiently motivated and interested readers to consult the original publications for a more detailed understanding of the methods and results of the studies mentioned. Furthermore, there is a bias towards discussing experimental results rather than discussing the impact of such experimental manipulations on husbandry, susceptibility to disease and exhibition of abnormal or disrupted physiology.

With the current (and needed) emphasis on biosecurity, and the descriptions of disease entities and methods of transmission contained in this text, I am disappointed that the volume did not address issues of biocontainment more emphatically. Many of the hazards that accompany use of select animal models of infectious disease, and the precautions necessary to protect all those who come in contact with such animals, are not common knowledge. The brief, well written chapter on zoonoses and occupational health (Chapter 5) might have provided a suitable place to discuss such topics. Furthermore, it would have been helpful if, within sections related to the use of each species, chapters addressing management included methods of containment husbandry and other necessary precautions.

Other benefits of the text are that it is well illustrated, that data on various biological features of each species are tabulated for simple retrieval and that the Index is thorough. In all, the text is quite comprehensive and provides a central resource for valuable information related to the care and use of several important laboratory animal species.

McGarry is President of McG Consulting, LLC in Fountain Hills, AZ.