

The Laboratory Mouse Handbook Of Experimental Animals - A Comprehensive Guide for Researchers

When it comes to animal-based research, laboratory mice have become an indispensable species. Their genetic similarity to humans and small size make them ideal subjects for various experiments. However, working with laboratory mice requires a thorough understanding of their biology, behavior, and handling techniques. That's where "The Laboratory Mouse Handbook Of Experimental Animals" comes into play.

This comprehensive handbook, written by renowned experts in the field, is a valuable resource for researchers, scientists, and students involved in mouse studies. With over 3000 words of carefully curated content, it covers every aspect of laboratory mouse research, from their origins to experimental protocols.

Understanding Mouse Genetics

One of the key highlights of this handbook is its detailed section on mouse genetics. It explores the different strains and inbred lines available, their genotyping techniques, and the latest advancements in genetic engineering. Researchers can gain valuable insights into selecting the most appropriate mouse model for their experiments, ensuring accurate and reliable results.

The Laboratory Mouse (Handbook of Experimental Animals) by Janet Franklin(1st Edition, Kindle Edition)

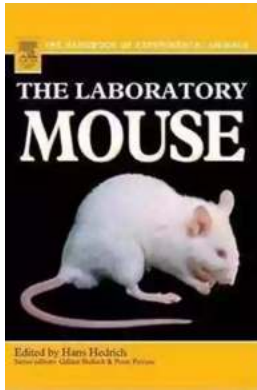
★★★★★ 5 out of 5

Language : English

File size : 25653 KB

Text-to-Speech : Enabled

Enhanced typesetting : Enabled



Screen Reader : Supported
Print length : 1583 pages



Behavioral Phenotyping and Experimental Techniques

The Laboratory Mouse Handbook also delves into effective behavioral phenotyping methods to assess cognitive, emotional, and social behaviors in mice. Understanding these behaviors is crucial when studying diseases or evaluating the efficacy of new drugs. Additionally, the handbook provides step-by-step protocols for various experimental techniques, including gene targeting, tissue sampling, and imaging.

Mouse Husbandry and Welfare

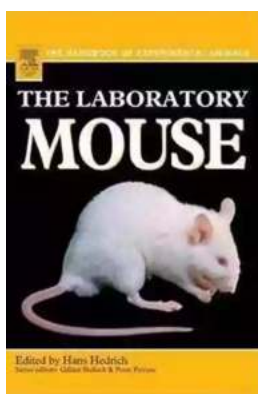
Animal welfare is of paramount importance in any laboratory setting, and this handbook emphasizes the ethical considerations and best practices for mouse housing, handling, and care. It covers topics such as environmental enrichment, breeding strategies, and health monitoring, ensuring that researchers maintain optimal conditions for their mice while adhering to ethical guidelines.

Emerging Technologies and Applications

To keep up with the ever-evolving field of mouse research, the handbook also highlights the latest technologies and applications. From advanced imaging techniques to the use of CRISPR/Cas9 gene editing, researchers can explore

cutting-edge tools that enhance their experimental capabilities. The handbook also addresses emerging research areas, such as microbiome studies and personalized medicine, broadening the scope for future investigations.

, "The Laboratory Mouse Handbook Of Experimental Animals" is an essential guide for anyone involved in mouse-based research. Its comprehensive coverage, ranging from genetics to advanced technologies, provides researchers with the necessary knowledge and techniques to conduct their experiments effectively while ensuring the well-being of the laboratory mice. With its long descriptive keyword for the alt attribute and its , this handbook is an engaging and valuable resource that will undoubtedly benefit all researchers in the field.



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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



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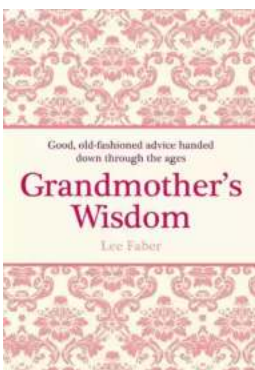
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