



# Experimental and Surgical Technique in the Rat

By H.B. Waynforth

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## Experimental and Surgical Technique in the Rat By H.B. Waynforth

The publication of this Second Edition, twelve years after the first, attests to the timelessness of the techniques used in experimental work with the rat. However, scientific progress inevitably brings to light new ideas and procedures. In particular, considerable progress has been made in the use of new anesthetics and analgesics. A completely new chapter has been written on these with unique emphasis on the applicability to the rat. The very variable standards of surgery that existed in the past are placed in perspective in another new chapter, which makes recommendations more in keeping with the higher standards now demanded of animal experimentation. A variety of new techniques have been added throughout to expand the usefulness of the book, and more illustrations have been added to help in the execution of the various procedures.

One of the greatest advances in the last twelve years is a greater appreciation for the well-being of experimental animals, and references to a more humane and refined approach have been made throughout this edition. This greater awareness of welfare issues demands that experimental animals be handled and used correctly and compassionately, with as little suffering as possible, and has led to a marked improvement in the attitude to proper training.

This book is still the only source which provides a detailed and up-to-date compilation of illustrated experimental methods for work with the rat. It will continue to be an invaluable reference to specific information for laboratory workers and will help considerably in training new investigators in the proper and considerate use of this species.

### Key Features

- \* All surgical techniques have been revised and updated
- \* A new section on anesthesia and post-operative care has been included
- \* Presents new techniques, particularly cannulation

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## **Experimental and Surgical Technique in the Rat** By H.B. Waynforth **Bibliography**

- Sales Rank: #4431817 in Books
- Published on: 1980-05
- Original language: English
- Number of items: 1
- Binding: Hardcover
- 284 pages



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#### From the Back Cover

The appearance of this second edition, some twelve years after the first, attests to the timelessness of the techniques used in experimental work with the rat. However, scientific progress inevitably brings to light new ideas and procedures. In particular, considerable advances have been made in the use of new anaesthetics and analgesics, and a completely new chapter has been written on these with unique emphasis on their applicability to the rat. The very variable standards of surgery that existed in the past are placed in perspective in another new chapter, which makes recommendations more in keeping with the higher standards now demanded of animal experimentation. A variety of new techniques has been added throughout to expand the usefulness of the book, and the number of illustrations in particular has been increased to help in the execution of the various procedures.

One of the most significant advances in the last twelve years has been a greater appreciation of the well-being of experimental animals, and references to a more humane and refined approach have been made throughout this edition. This greater awareness of welfare issues demands that experimental animals are handled and used correctly and compassionately with as little suffering as possible, and has led to a marked improvement in the attitude to proper training.

This book is still the only source which provides a detailed up-to-date compilation of illustrated experimental methods for work with the rat. It will continue to be an invaluable and unique reference of specific information for laboratory workers and will help greatly in training new investigators in the proper and considerate use of this species.

#### About the Author

- Director, Comparative Biology Centre, University of Newcastle upon Tyne
- Professor of Laboratory Animal Science, University of Newcastle upon Tyne
- Vice-President, Institute of Animal Technology
- Course organizer in Laboratory Animal Anaesthesia and Analgesia for more than 12 academic institutions and associations
- Past President, Association of Veterinary Anaesthetists
- Past Acting Chairman (2007-2008) and Vice Chairman (2004-2007), National Centre for Replacement, Refinement, and Reduction of Animals in Research
- 14 Recognition Awards for his work received in last decade from associations, corporations and institutions

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