

## BOOK REVIEW

# THE COST MANUAL OF LABORATORY ANIMAL CARE AND USE

Refinement, Reduction and Research

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COST, (Cooperation in Science and Technology) has been set up as a European intergovernmental body which promotes and coordinates nationally funded research in Europe. In this context, this manual edited by Bryan Howard, Timo Nevalainen and Gemma Perretta, deals with a wide variety of laboratory animal and welfare issues which are critical to the science of working with laboratory animals. Among the subjects that the manual covers includes aspects of design of animal facilities, environmental refinement, design and statistical analysis of experiments, animal models, genetically modified animals, experimental procedures and education and training of individuals working with laboratory animals. The fundamental subjects of anesthesia and analgesia, humane endpoints and euthanasia are covered in three chapters.

The manual relies heavily on the widely accepted principles of the Three R's (reduction, refinement and replacement) of Russell and Burch and is written by the most prominent researchers from Europe, including Dr. Rony Kalman from Hebrew University of Jerusalem.

In the introduction, Dr. Bryan Howard recognizes and discusses the ongoing controversies and questions regarding the use of animals for research. He emphasizes the attitude of "culture of care" through the application of the principles of the 3R's, and the commitment of everyone involved in working with laboratory animals from both the scientific and welfare aspects.

The chapters on the design of animal facilities together with that on housing and care provides an excellent background for knowledge on this complex and critical subject which plays an important role in the outcome of animal experimentation. These two chapters are complimented by a chapter of environmental refinement.

A chapter on ethical evaluation of scientific procedures is comprehensive and should be useful to veterinarians and researchers involved in animal experimentation and participants in ethical review committees. This chapter is complemented by chapters on study design, animal models and humane endpoints, subjects which are indispensable for members of the ethical committee.

This European manual in some ways parallels the American "Guide of the Care and Use of Laboratory Animals". However whereas the "guide" is legally binding document, the "manual" serves as a suggested standard to those engaged in the field of laboratory animals. Whereas the "manual" deals with critical subjects in great depth, the "guide" covers a wide range of subjects but only in a basic fashion relying on references. Unfortunately the manual lacks a chapter on aquatic animals which has been included in the new edition of the "Guide" (8<sup>th</sup> edition). The use of fish has become a significant means

of replacing mammals in research. Both the "guide" and the "manual" lack information and direction in the search for replacement with alternatives, a subject which requires more attention.

The COST manual is highly recommended for all those working in the field of laboratory animals; the book serves as an excellent source for a wide range of subjects with emphasis on the ethical aspects on the care and use of laboratory animals.

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