

## Animal Ethics in Animal Research

The use of animals in research has always been surrounded by ethical controversy. This book provides an overview of the central ethical issues focussing on the interconnectedness of science, law and ethics. It aims to make theoretical ethical reasoning understandable to non-ethicists and provide tools to improve ethical decision-making on animal research. It focuses on good scientific practice, the 3Rs (replacement, reduction and refinement), ethical theories applied to specific cases and an overview of regulatory issues. The book is co-authored by experts in animal research, animal welfare, social sciences, law and ethics, and provides both animal researchers and members of animal ethics committees with knowledge that can facilitate their work and communication with stakeholders and the public. The book is written to provide knowledge, not to argue a certain position, and is intended to be used in training that aims to fulfil EU Directive 2010/63/EU.

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Helena Röcklinsberg, Mickey Gjerris, I Anna S. Olsson  
Frontmatter  
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# Animal Ethics in Animal Research

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## Notes on the Authors

There are three main authors of this book. Helena Röcklinsberg, who initiated and was the coordinator of the project, is an animal ethicist at the Swedish University of Agricultural Sciences, Uppsala, sharing her time between teaching and supervising at all animal science programs, from bachelor level to doctoral students, and performing research in animal ethics and food ethics. She is also a member of the committee for ethics and education in animal research at the Swedish Board of Agriculture since its establishment in 2008. Mickey Gjerris is a bioethicist at The University of Copenhagen where he for more than 15 years has been doing research in (among other subjects) animal ethics and has taught courses for veterinarians, researchers and animal caretakers both at the university and for private companies. I. Anna S. Olsson is an animal welfare scientist at the University of Porto, Institute for Research and Innovation in Health, where she is developing research into the behaviour and welfare of laboratory animals and ethical aspects of animal use, organizes training in laboratory animal science for researchers and technicians, and coordinates the animal ethics committee.



## Preface

Most people will agree that it is wrong to subject another sentient being to pain, distress, frustration, mental suffering and death. However, most will also agree that there are exceptions to this very general rule. The first one is that we sometimes have to subject someone to suffering to help them – even though we cannot explain this to them. That is typically the situation when we take our family animals and even our small children to the clinic to get them vaccinated. Yet, as it is something that is done to benefit the animal or child in question, very few would find this wrong. The other exception is when the expected end results seem to justify us doing it. Modern warfare notoriously creates ‘collateral damage’ – civilians hurt or killed by the conflict even though they have nothing to do with it. The justification does not remove the sadness and the tragedy, but many will still find it justified to – under certain conditions – enter into armed conflict to protect democratic societies.

The world of research animals falls into this second category of exceptions. We use animals in a multitude of ways to create new knowledge, check the validity of existing knowledge, train doctors and veterinarians in surgical procedures, test medical compounds for human safety and so on. None of this is done with malicious intent, but to achieve what many find are laudable goals. This does not mean, however, that there are no ethical issues involved in using animals in research. The most obvious question is when it is justified to use animals for purposes that are not in their own best interest. But questions evoked within the research process also arise, e.g. how to handle and house the animals, which animals to use, how to implement the 3Rs into research practice, what minimum level of welfare the animals are entitled to and whether the death of the

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animal, irrespective of the way it comes about, carries ethical significance. Further, genetic modification of animals into e.g. disease models models raise a number of ethical issues.

A wide range of ethical issues have long been recognized in the research world, among those taking care of the animals, among ethicists and other scholars studying the relationship between humans and animals, and in public discussions. In this book we focus on the core ethical considerations evoked by everyday animal research and present and discuss central ethical theories and a number of relevant concepts such as animal welfare, rights and integrity.

The purpose of this book is not to say who is right and who is wrong. We do not pretend to hold the answers, but we do hope to inspire qualified discussions and help people working in the world of research animals to better grasp and elaborate on the issues. We are, so to speak, not looking to tell our readers what they should think, but to help them make informed decisions and qualify their opinions on these matters.

The book focuses on the ethical, legal and social issues related to the use of animals in research and is aimed at readers who have no or only little prior theoretical experience with these issues. The book presents a range of issues with relevance for animal research such as research design, the 3Rs, animal welfare, public perceptions, public participation, animal ethics, legislative frameworks etc., and introduces the reader to the ethical and philosophical background of these areas. As such, it is an introduction to the range of philosophical reasoning possible in relation to the use of animals in research, not a comprehensive presentation of these theories. We consider this approach important for professionals in animal research, as the new regulation within the European Union Directive (2010/63/EU) requires not only mandatory training to obtain permission to work with research animals but also that this training include ethics. We envisage this textbook to be used as the basic curriculum at such training courses, as it covers ethical considerations, practical considerations and an overview of the legal framework in which the use of animals in research is embedded.

The book aims at considering and discussing issues relevant to professionals holding different roles, e.g. technicians, students, researchers, veterinarians as well as teachers, members of animal ethics committees and policy makers. We focus on an EU context and give an elaborate description of the North American situation in order to cover the regions known to perform most of the world's animal-based research governed by detailed legislation and established guidelines and assessment structures. With few exceptions, the issues and perspectives presented are internationally relevant, and hence we hope that the book will be useful to researchers in other parts of the world as well.

Against this background, the book has a clear goal: to help the reader see the values embedded in the discussions and the complexity and interrelatedness of the many issues in using animals for research purposes. We also intend to show the context of ethical discussions concerning research animals. When working with research animals, it is important to understand not only the ethical issues but also the practical context. How are the animals used and for what purposes? What does it mean to implement the 3Rs? What are the legal requirements both in the EU and in other countries with which one might collaborate? What methods exist to involve a broader public, and what are good reasons for doing so? As a whole, the book gives a complete coverage of animal research ethics. The chapters have been written so that they can be used as stand-alone texts, in order to better serve a wide readership with different background knowledge, but we believe that a comprehensive understanding of the field can best be achieved by reading the whole book. Our main hope is that this will encourage and enable animal researchers and animal technicians to enter ethical discussions and to facilitate such.

The book consists of seven chapters that cover different aspects of the practical, ethical and legal issues connected to research animals. Chapter 1 describes issues related to research ethics in general and to designing animal research especially, elaborating on the interconnectedness of research ethics, animal ethics, animal welfare and

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research design; it also considers ethical deliberations in animal ethics committees. In Chapter 2 we present the most used and known normative ethical theories and discuss their stance on the use of animals in research. Chapter 3 contains a discussion of what 'good scientific practice' means when applied to the area of research animals, focusing on the concept of animal welfare, how it can be applied, the classification of degree of severity as well as a discussion of how to interpret the 3Rs. The first three chapters are closely linked to Chapter 4 in which six recent examples of animal-based research are presented and scrutinized from the position of the ethical theories. The chapter concludes with a discussion of the role of social aspects for evaluation of research. Chapter 5 differs somewhat from other chapters not only in terms of its length but also because it holds less of discussion; instead, it presents an overview of relevant legislation in many parts of the world. The main focus is on the EU and the recent directive on research animals, as well as the legislation and ethical assessment process in North America, but the chapter also includes descriptions of the regulations in Asia, Australia and Latin America, followed by a presentation of a number of guidelines developed by the research community itself.

As legislation is at least in part meant to meet public concerns about animal research, we focus on public involvement in Chapter 6. Although there is often public concern about the use of animals in research, the possibilities for the public to get involved differ. The chapter ends with a discussion of how public involvement can take place, as public involvement is crucial for public support. Finally, in Chapter 7 we elaborate on alternatives to use of animals, and try to look into the crystal ball and provide a guesstimate on where both the use of research animals and the ethical discussions connected to it can go in the future.

Please note that after each chapter there are a few questions that can be used to discuss the main points of the chapter. There are also references after each chapter that can be used as a resource for further information, and an index of key terms and authors at the end of the book.

## Acknowledgements

The three main authors have included a series of co-authors, each experts within their fields, to ensure that the knowledge presented here is comprehensive and correct. At the beginning of each chapter (or section) the readers will be able to see who has contributed and what their affiliation is. We would like to thank all co-authors for sharing their knowledge and time. As already mentioned, the world of research animals is complex, spanning scientific categories from veterinary medicine, biomedical science and law to social sciences and philosophy. This book would not have been possible without contributions from the co-authors representing these and other fields.

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