

## Contents

*Preface to the second edition* ix

*Acknowledgements* xi

- 1 **Issues in animal experimentation** 1
  - Aims 1
  - Definitions 6
  - Scope 6
- 2 **A history of animal experimentation** 8
  - The origins of vivisection in Europe 8
  - Prevailing humanist attitudes to animals 9
  - The rise of modern biomedical studies 11
- 3 **Opposition to animal experimentation** 15
  - Introduction 15
  - Early opposition 15
  - Utilitarianism and the rise of popular concern 17
  - Revolution during the nineteenth century 19
  - Beyond Britain: opposition in the USA into the twentieth century 26
- 4 **The moral status of animals** 35
  - On the moral status of animals 35
  - Moral arguments based on reason 40
  - Ethics: room for emotion? 49
  - Moral stewardship 54
  - Summary 56
- 5 **Animal use** 58
  - How are animals used? 58
  - Fundamental and applied biological research 58
  - Genetic research 60

|   |                                                                                                             |     |
|---|-------------------------------------------------------------------------------------------------------------|-----|
|   | Behavioural research                                                                                        | 61  |
|   | Education and training                                                                                      | 62  |
|   | Production of useful biological and therapeutic materials                                                   | 62  |
|   | Product testing                                                                                             | 63  |
| 6 | <b>The regulation of experiments</b>                                                                        | 64  |
|   | Laws governing humane use of laboratory animals                                                             | 64  |
|   | United Kingdom                                                                                              | 65  |
|   | Australia and New Zealand                                                                                   | 67  |
|   | United States of America                                                                                    | 69  |
|   | Summary                                                                                                     | 72  |
| 7 | <b>Seeking alternatives</b>                                                                                 | 74  |
|   | Introduction                                                                                                | 74  |
|   | Replacement, reduction and refinement                                                                       | 75  |
|   | Alternatives to non-human vertebrates in scientific research                                                | 77  |
| 8 | <b>Conclusions</b>                                                                                          | 98  |
|   | The construction of a modern research institution                                                           | 98  |
|   | <i>Ethical guidelines for students in laboratory classes involving the use of animals or animal tissues</i> | 102 |
|   | References                                                                                                  | 104 |
|   | Index                                                                                                       | 113 |