

Preface to the second edition

It is now nearly ten years since Cambridge University Press published *Animal Experimentation: A Guide to the Issues* (2000). It is appropriate to reflect on what has happened since then within the accepted framework of the 'three Rs' principles (Replacement, Reduction and Refinement: Russell and Burch 1959) in animal research, education and testing. What advances, for example, have been made in the search for alternatives to the use of vertebrates in biomedical research? Are there fewer animals used in research today? Has there been a renewal of the impetus to refine experimentation with animal welfare as the priority?

To answer such questions requires a thorough reappraisal of where western biomedicine, education and safety testing are presently placing their emphases. Overwhelmingly, the extraordinary growth in research involving laboratory mice in all areas of genetic and molecular research has seen an increase in the number of animals used in scientific procedures for the first time since the 1980s. The enormous breeding programmes required to generate heterozygous strains of mice with genetic modifications has brought to bear entirely new ethical and welfare concerns regarding husbandry, housing and 'surplus' animals. What steps have been taken in Britain, Europe, the USA, Australasia and elsewhere to address this? Were existing regulatory frameworks adequate, or have relevant statutes been necessarily updated?

Iconic animal species, particularly non-human primates, continue to be used as research subjects, reflecting their importance as a model in some biomedical sciences, especially in the USA. What refinements to their lives in captivity have been made to respect their contribution to modern science?

At the end of the twentieth century general knowledge of computers and the internet was nowhere near as sophisticated as it is today. We are all more amenable to new ideas about where mass communication

can take us. Has this been reflected in alternative methods of studying organ systems or in facilitating corpse-free dissections?

With such questions in mind, Cambridge University Press has published an updated edition of *Animal Experimentation: A Guide to the Issues*. It is, once again, aimed at life science students, some of whom will follow careers as tomorrow's researchers, but at the same time its clarity of style and balanced treatment will enable lay people and experts to read it with equal ease. Students and researchers will find a non-intimidating, easy-to-read and readily understood introduction to the principal issues in the animal experimentation debate.