

The Principles of Humane Experimental Technique

W.M.S. Russell and R.L. Burch

Foreword to Special Edition

In October 1959, Major Charles Hume, Founder of the Universities Federation for Animal Welfare, presented a paper at the Tenth Annual Meeting of the Animal Care Panel ¹ in Washington, DC. In this he reported UFAW's recent change of direction from laboratory animal husbandry to the far more controversial topic of experimental techniques.

He was referring to the appointment in 1954 of William Russell, whom he described as a brilliant young zoologist who happened to be also a psychologist and a classical scholar, and Rex Burch, a microbiologist, to inaugurate a systematic study of laboratory techniques in their ethical aspect. This led to publication in 1959 of *The Principles of Humane Experimental Technique* in which they classified humane techniques under the headings of **replacement**, **reduction**, and **refinement**--now commonly known as the **three Rs**.

In some ways this elegant classification was 25 years ahead of its time. Nowadays the three Rs are widely used by all responsible scientists and one hardly ever reads or hears a discussion on laboratory animal welfare which does not refer to them.

Hume's reference to a change of direction recalled that earlier, in 1947, UFAW had published its first *Handbook on the Care and Management of Laboratory Animals* edited by Professor Alastair Worden. The first chapter of this included a historical note of the adoption in 1871 by the British Association for the Advancement of Science of some basic principles of animal experimentation. This led via a Royal Commission, to the *Cruelty to Animals Act 1876* which has only recently been replaced by the *Animals (Scientific Procedures) Act 1986*. The fact that it took over 100 years for new legislation is perhaps an indication of the quality of the drafting, and even more so of the subsequent, effective administration of the 1876 Act.

Meanwhile, UFAW maintains its strong interest in animal husbandry and the 6th edition of the handbook was published in 1987. This was followed in 1990 with production of its award winning video program *Environmental Enrichment: Advancing Animal Care*. The Federation has also continued to be concerned with research techniques and has published a series of *Guidelines on the Care of*

Laboratory Animals and their Use for Scientific Purposes. These include sections on pain, analgesia and anesthesia; surgical procedures, and the planning and design of experiments. Further sections of the guidelines are to include the use of alternative, i.e. the three Rs, and the legal and ethical aspects of experimentation.

In 1990, the Humane Society of the United States announced its new annual *Russell and Burch Award*. This is to recognize researchers or educators who have made outstanding contributions towards the advancement of alternative methods in biomedical research, testing, or higher education. In this context alternative methods are considered in the broad sense of replacement, reduction, and refinement as first articulated by Russell and Burch.

It is perhaps appropriate that their book, originally published by Methuen & Co. Ltd, London, reprinted in 1960 by Charles C. Thomas, Springfield, Illinois, should now be reissued by UFAW. This special edition is a further memorial to Charles Hume and a long overdue tribute to Bill Russell and Rex Burch. It is also a timely recognition of the *Russell and Burch Award* recently instituted by the Humane Society of the United States.

Over the years, there has been a long standing and influential movement within the scientific community both in Europe and North America to reduce the suffering involved in biomedical research. Although now over 30 years since the first publication, it is important that this original work, which is still relevant today, should be readily available for the new generation of research scientists.

April 1992

¹The Animal Care Panel became the American Association of Laboratory Science in 1967.