

Some discussion of these principles might have been a valuable addition to this report. However, these are minor points. The report sets best-practice standards and should be disseminated and used widely in the planning of research using animals.

Refining procedures for the administration of substances (2001) Report of the BVAAWF/FRAME/RSPCA/UFAW Joint Working Group on Refinement. *Laboratory Animals* 35: 1-41

Pain in man and animals

In March 2000, the Royal Society of Medicine held a symposium sponsored by the Fund for the Replacement of Animals in Medical Research (FRAME) to bring together workers on pain in humans and animals and to consider recent advances in our knowledge of the subject. The proceedings of this meeting have now been published and provide an interesting collection of thoughtful and well-written essays.

In his chapter 'What is pain and what is its purpose', Professor Sir Michael Bond introduces the subject. He quotes Melzack and Casey (1968): "to consider only the sensory features of pain, and ignore its motivational and affective properties, is to look at only one part of the problem, and not even the most important part at that." The mechanisms involved in generating the affective aspects of pain — how it actually feels — are still largely a mystery, but Bond outlines evidence that the neuronal networks involved are widely distributed in the (human) brain. Other chapters cover: how concerns about pain in animals have changed throughout history (Professor David Morton); the evolution of pain (Professor Donald Broom); pain in the foetus and neonate (Professor Maria Fitzgerald); mechanisms of inflammatory pain (Dr Andrew Rice); neurophysiology of acute and chronic pain (Professor Anthony Dickenson); recognition and assessment of pain in humans (Dr Gregory Hobbs); recognition and assessment of pain in animals (Professor Paul Flecknell); history of analgesia (Dr Derek Eastwood); management of acute pain in humans (Professor David Rowbotham); patterns and management of pain in animals (Professor Andrea Nolan); pain, animals and the law (Mr Mike Radford); the way forward for research on pain (Dr Stephen Hobbiger, Dr Kevin Smith) and a 'three-Rs' view of pain research (Professor Michael Balls).

This is a cohesive set of papers that provides a good overview both of the current state of knowledge and of where the challenges in recognising and dealing with acute and chronic pain remain.

Pain: Its Nature and Management in Man and Animals (2001) Edited by Lord Soulsby of Swaffham Prior and Professor David Morton. Published by FRAME and The Royal Society of Medicine Press in their International Conference and Symposium Series, No 246. 124 pp. A5 paperback (ISBN 1 85315 481 4). Available from The Royal Society of Medicine Press Ltd, 1 Wimpole Street, London W1G 0AE, UK. Price £20.00.

Biotechnology: science, welfare and ethics

In 1997, the UK's Animal Procedures Committee, the body established under the Animals (Scientific Procedures) Act 1986 [A(SP)A] to advise the Home Office on the operation of the Act, decided to establish a working party to examine developments in biotechnology. The aim was specifically: "To consider, in the light of current and likely scientific developments, the adequacy and appropriateness of the present regulatory regime under A(SP)A in regard to transgenic and cloned animals having regard ... both to the legitimate requirements of science and industry and to the protection of animals from avoidable suffering".