

### **Veterinary Psychopharmacology**

SL Crowell-Davis and T Murray (2006). Published by Blackwell Publishing, 2121 State Avenue, Ames, Iowa 50014, USA. 261 pp Paperback (ISBN 0-8138-0829-4). £39.95.

*Veterinary Psychopharmacology* is a very useful reference book for veterinary surgeons with a particular interest in behavioural medicine. The authors have carefully collated evidence as to the basic pharmacology of the various classes of medication used for the modification of behaviour in domestic animals, as well as the clinical indications for their use.

The first chapter is an introduction to the use of psychopharmacological agents, and, quite rightly, emphasises the importance of using drug therapy in combination with behaviour therapy. The section describing the clinical process in behaviour therapy is useful, and focuses on the importance of establishing a good diagnosis through an effective history. Some differences in approach between practitioners, which may be geographical, are reflected in this section: for example the authors do not appear to consider the early history of the animal and the impact of this on the current behaviour, to be an important part of the behavioural history, whereas for other practitioners this is considered fundamental in the establishment of the behaviour, and the associated emotional response. This approach appears to reflect differences in how behavioural signs in animals may be perceived. For example, 'fear aggression' is described as aggression that occurs in combination with behavioural signs of fear (such as growling and withdrawing). Aggression in which these behavioural signs of fear are not displayed is categorised as 'offensive'. An alternative approach is to consider that animals may be fearful of a stimulus, but learn to become more confident that aggression is an effective behavioural 'strategy' for resolving the situation, and hence progressively show less behavioural signs associated with 'fear', even though the 'cause' of the behaviour is still fear of the stimulus. This difference in categorisation will affect interpretations of drug class use within the text, so the reader should be clear as to how these terms are used by the author when interpreting the appropriateness of different classes of medication. Another example is in the distinction between 'fear' and 'anxiety' in the text. Although 'anxiety' is defined in the text, the authors appear to use the term 'anxiety' to describe mild or moderate fear behaviours, rather than a state induced by uncertainty or anticipation. Hence differences in established 'fear responses' to specific stimuli and the hypervigilance and arousal associated with anxiety of an uncertain or unpredictable context is not discussed or explored in relation to the use of different drug classes.

The introductory section of the book also gives the practitioner useful information with regard to the licensing of products and their relative costs: the latter being information which is not readily accessible in a single location elsewhere. There is also an informative section on the problems and possible solutions related to giving medication to animals, and the importance of educating clients as

to their use. It is also nice to see that the authors categorically state that medications should be maintained until after the resolution of the problem behaviour, and then the animal gradually weaned off the product.

In the introductory section the authors also discuss the problems associated with working in a field where there is sometimes patchy evidence available upon which to make clinical decisions. There is currently not only a relatively poor understanding of the exact action and effect of many of the medications discussed, especially in domestic animals, but also the relationship between different presentations of behaviour and underlying neuroanatomical and physiological changes in the brain are often not fully elucidated. The authors also highlight the fact that, although analogy with human psychiatric conditions is often used due to lack of other supporting evidence in the use of particular agents, such comparisons are not necessarily valid.

The information in this book is presented in a useful way. The chapters are set out such that the basic pharmacology of each drug category is summarised, followed by the clinical applications for each, including the individual medications available within each class, and any available information about use in domestic animal species. Hence, the chapter on GABA and glutamate pharmacology is followed by a chapter on the clinical use of benzodiazepines. The pharmacology of serotonin is followed by the clinical use of selective serotonin re-uptake inhibitors (SSRIs) and the azaperones. The pharmacology of the other monoamine neurotransmitters is followed by chapters relating to monoamine oxidase inhibitors (MAOIs), antipsychotics; CNS stimulants, and tri-cyclic antidepressants. The pharmacology of the endogenous opioid peptides is a useful chapter, and is followed by discussion of the clinical use of opioids and their antagonists. Finally there is a chapter on the use of hormones in behavioural medicine — included by the authors for historical purposes, as they do not recommend the use of progestins in modern clinical practice due to their non-specific action and unacceptable side-effects.

In some of the 'clinical application' the authors have included case studies: these do little to enhance the information provided in the book. Perhaps on account of their necessary brevity, these studies cannot consider the complexities associated with the decision-making process involved in weighing up whether drug use is appropriate, and, if so, which medication is indicated. It would have been more helpful to have some indication as to the authors' own experience of certain products, for example unusual responses, or situations in which a product was not found to be efficacious.

The book finishes with a chapter on polypharmacy. Common combinations of drugs are described, as well as known adverse interactions. A very useful appendix gives the reader the licensed name for each product in different countries around the world.

Overall, this book is a hugely valuable addition to the veterinary behaviour world. Anyone involved in the prescription of psychopharmacological agents should not

only have this book on their shelves for reference, but also have taken time to read both the information on the basic science for each neurotransmitter group, and the clinical applications of the use of each, before taking any tablets off the shelf.

Rachel Casey,  
University of Bristol, UK

### **Animal Welfare: global issues, trends and challenges**

ACD Bayvel, SA Rahman and A Gavinelli (2005). Published by the World Organisation for Animal Health, 12 rue de Prony, 75017 Paris, France. 300 pp Paperback (ISBN 92-9044-658-7) Scientific and Technical Review 24 (2), August 2005. Price €50. [www.oie.int](http://www.oie.int).

Animal welfare was identified as a priority for the World Organisation for Animal Health (OIE) in its 2001–2005 strategic plan and this scientific and technical review reflects their unique global perspective. The issue brings together invited contributions from leading authors in a range of welfare-related subject areas, resulting in 27 separately indexed articles.

The collection is divided into five sections, each with a different emphasis. The first, ‘Science-based evaluation of animal welfare’, brings together a series of reviews on welfare assessment in animals which relate to humans in different contexts, with contributions on farm, companion and laboratory animals. Interestingly, there are also papers relating to wild and captive animals and to an emerging area of welfare interest — aquatic animals. Contributing to the continuing debate regarding sentience and pain perception in fish, this timely article ends with a useful list of priorities for improving the welfare of aquatic animals, including a call for research to improve our understanding of welfare issues in poikilothermic vertebrates and invertebrates.

In the second section ‘Global perspectives — OIE regions and member countries’, representatives from various parts of the world (Americas, Europe, Africa, the Middle East and Asia) present reports on animal welfare issues in their region. Some of this section makes for depressing reading, clearly highlighting that in many parts of the world attitudes to animals differ markedly from Western, developed society and that in many areas attempts to improve animal welfare are only just beginning. Nevertheless, the articles presented do a very useful job of outlining the particular welfare issues facing each region and their relationship to various cultural, social, economic, political, religious and even geographical influences. This ‘snapshot’ of the current situation in different parts of the world is a useful reference and also provides a basis for comparison regarding future progress. ‘Global perspectives — stakeholders’ is the title of the third section in which the interests of various stakeholders are considered including the meat and livestock sector, non-governmental organisations, the veterinary profession and food retailers. The emphasis here (and in much of the remainder of the text) is on farm animal welfare, and the representation of different elements of the overall industry

reflect recognition of the complex ‘farm to fork’ process and the importance of an international, broad-based approach to the issues.

The fourth section ‘OIE animal welfare standards’ outlines progress that has resulted from the collaborative work of *ad hoc* groups brought together by the OIE to address selected priority areas; namely, the transport of animals by sea, the transport of animals by land, the slaughter of animals for human consumption, and the killing of animals for disease control purposes. The reviews presented reflect the efforts of these groups of experts to produce guiding principles and welfare standards based on available scientific knowledge, and all have been approved and adopted by the OIE. From a European perspective, it would appear that many of the guidelines are already enshrined in existing national or EU regulations, but they clearly serve as standards to aim for in countries with little or no welfare legislation.

The final section, entitled ‘Strategic animal welfare issues’, contains a collection of articles covering a range of topics, in recognition of welfare issues falling within the OIE remit that are not addressed elsewhere or by existing *ad hoc* groups. These include informative papers on welfare monitoring and quality assurance, welfare and international trade, food safety and welfare and the role of developing countries.

As the title suggests, the scope of this publication is wide and rather ambitious, and perhaps inevitably in a multi-authored work of this type, the articles vary in style and technicality. Critical evaluation of the available literature was very much more evident in some articles than others, and the nature of some contributions gave the strong impression that their content was based to an extent on personal viewpoints and experience. Who will find this publication useful? In the preface it is suggested that its purpose is “communication with member countries, the private sector, and society in general” and it is not clear who, more specifically, this volume is trying to reach. As an animal welfare researcher, I found much of the content useful, if somewhat unfocused at times. The grouping of articles into sections seems quite arbitrary in places and it is clear that this is a series of related journal articles rather than a book as such. Nonetheless, this collection contains a huge amount of information making it a useful resource for anyone with an interest in animal welfare and how it is developing globally.

The animal welfare implications of this scientific and technical review and the standards it seeks to promote remain to be seen. At the very least, this review demonstrates the OIE’s continuing commitment to provide realistic and science-based international welfare guidelines that take into account important region-specific constraints. Everyone recognises that cultural and economic barriers can hamper the implementation of measures to improve welfare and these are usually most obvious in developing countries. However, this volume also reminds us that a range of other issues such as enforcement, consumer behaviour and for some species, lack of scientific knowledge are also relevant, even in countries which consider animal welfare a priority.