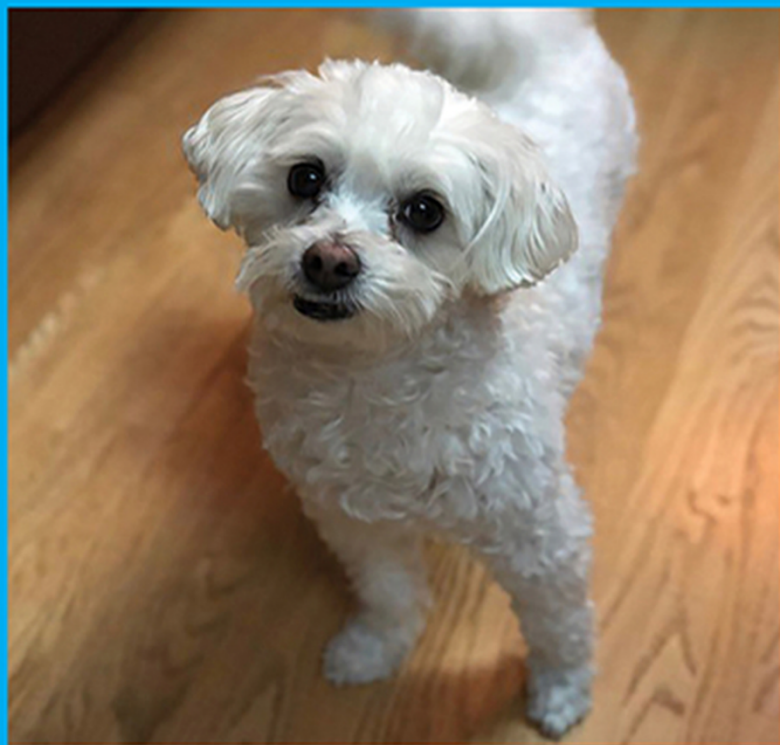


Second Edition

# Veterinary Psychopharmacology

Sharon L. Crowell-Davis  
Thomas F. Murray  
Leticia Mattos de Souza Dantas



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## Veterinary Psychopharmacology



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**Second Edition**

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*For my children, James Michael and Kristina Ruth, who have been a source of invaluable support through a rough few years. For my husband, Bill, who loved being married to a scientist, and who supported my work in so many ways I couldn't list them all. For my new co-author, Leticia Dantas, friend and colleague beyond compare. For my parents, Ruth and Wallace Davis, who have passed on to another world, but who are also with me every day. Thank you for everything you taught me. For all the furred and feathered beings who have taught me so much over the years. For Rhiannon, who understands.*

– Sharon L. Crowell-Davis

*This is dedicated to my wife Cristina P. Murray, daughter Lia L. Murray and family Maltipoo, Sport.*

– Thomas F. Murray

*To all my patients and beloved pets who have driven me to relentlessly seek more knowledge, more experience, and never accept defeat even when inevitable as sometimes it is in medicine.*

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– Leticia Mattos de Souza Dantas





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## Preface

The first edition of this book grew out of a series of phone calls that Dr. Crowell-Davis received over the years from various veterinarians wanting information about their patients' behavior problems and the psychoactive medications that might help them. What were appropriate drugs for given problems? What were appropriate doses? What side effects should be watched for? The first answer to this steadily accumulating set of questions was a continuing education course in psychopharmacology specifically organized for veterinarians. The course was first presented at the University of Georgia in November of 2001 and is now part of UGA's Outpatient Medicine annual Continuing Education, as Behavioral Medicine has become integrated with all other specialties of our teaching hospital. From the original courses, taught by Dr. Murray and Dr. Crowell-Davis and the assistance from the clinical residents at the time (Dr. Lynne Seibert and Dr. Terry Curtis), the next logical step was a textbook so that practicing veterinarians would have a resource to turn to for the answers to their various questions. Years later, Dr. Crowell-Davis and Dr. Dantas felt an urgent need to update the book and add several new drugs that more recently are used by diplomates of the American College of Veterinary Behaviorists, so this knowledge could be available to general practitioners. Where studies were available, we tried to make this edition purely evidence-based and avoided including personal communications and short publications as much as possible.

As this edition goes to print, we are already planning for the third as new information and protocols in veterinary mental health care keep being tested and developed.

Information on the effects of various psychoactive drugs in dogs, cats, and other veterinary patients comes from two major sources. First, animals were often used to test and study the actions of various drugs during their initial development. Thus, the reader who peruses the references will find papers published as early as the 1950s, when major breakthroughs in psychopharmacology were being made to much newer publications in human and veterinary neuroscience. With the establishment of the American College of Veterinary Behaviorists in 1993 and the overall rapid development of the field of Clinical Behavioral Medicine, there has been increasing research on the efficacy of various medications on the treatment of various mental health and behavioral/psychiatry disorders of companion animals, zoo animals, and other nonhuman animals.

There are often huge gaps in our knowledge, and the reader may note them throughout the book. While we can glean bits and pieces of pharmacokinetic and other data from studies done on dogs and cats during early drug development, the quality and quantity of the information are highly variable. Studies of teratology and carcinogenicity are typically done on rats, mice, and rabbits, while comprehensive studies of all aspects of pharmacological activity in the body are

done only in humans, the species that has historically been of interest. It is hoped that, as interest in this field continues to evolve, more comprehensive data will become available; new data will be supplied in future editions.

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We wanted to keep the acknowledgments from the first edition to the many people who, besides the authors, contributed to the work involved in bringing together the information presented at that time. Of particular assistance were Linda Tumlin, Wendy Simmons, and Lucy Rowland. In their capacity as librarians and reference librarians they were invaluable in locating and obtaining much of the information provided in our first edition.

We also could not have developed and run the Behavioral Medicine Service and

the didactic program at the University of Georgia to this date without the continuing support of various administrators over the years. In the first edition, Dr. Royce Roberts, Dr. Crowell-Davis' department head of many years was acknowledged. On this edition, we would like to thank Dr. Stephen Holladay for all his encouragement and support to both of us. Dr. David Anderson, Dr. Keith Prasse, Dr. Bob Lewis, and Dr. Jack Munnell have also facilitated Dr. Crowell-Davis' continuing work in this field previously. In the past 10 years, our service has had major support from our hospital director, Dr. Gary Baxter, to whom Dr. Dantas is incredibly grateful as he has supported and allowed for the service's revitalization, allowing for a more competitive and business-oriented approach to her practice.

Finally, this book is for all animals who co-exist with humankind, providing us with so much affection, companionship and even health benefits, but who have to adapt to our lifestyle and often undergo significant mental suffering that can remain ignored, undiagnosed, and untreated. Our mission is to heal and to improve the quality of life of all patients we have the privilege to treat; and increase the awareness in our society that the mental and emotional suffering of animals matters.



## Part I

### Principles of Veterinary Psychopharmacology

